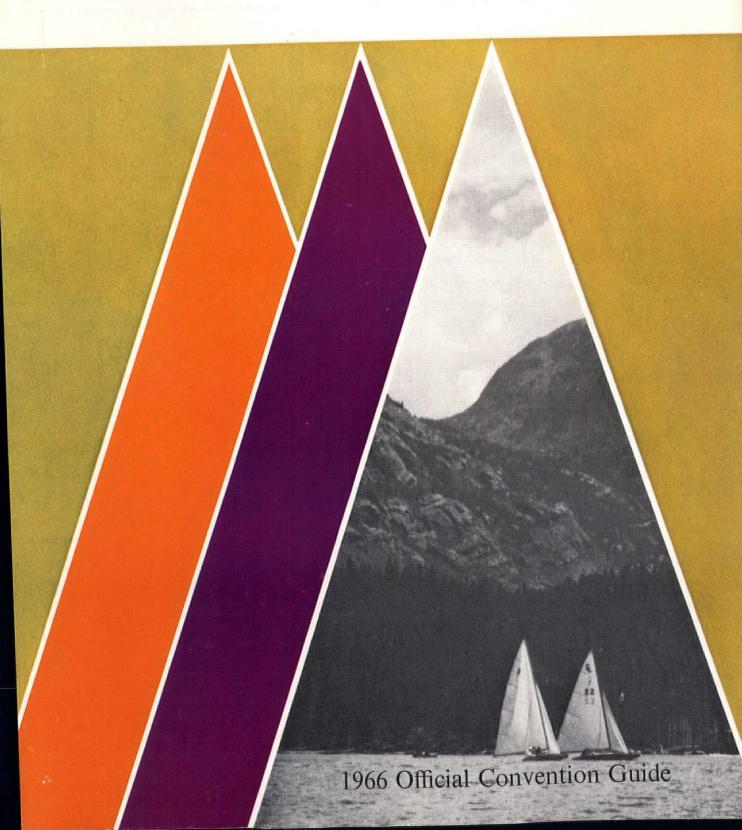


**JUNE 1966** 





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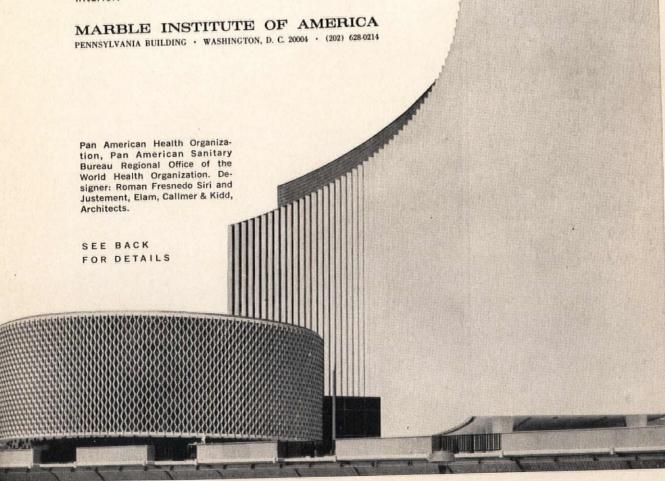
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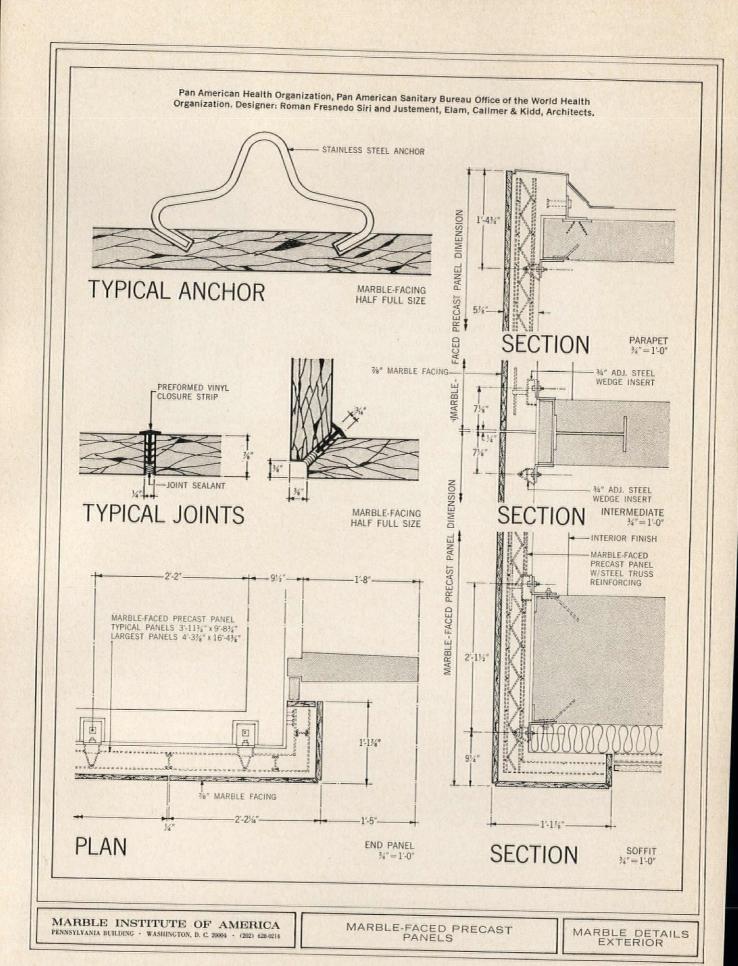
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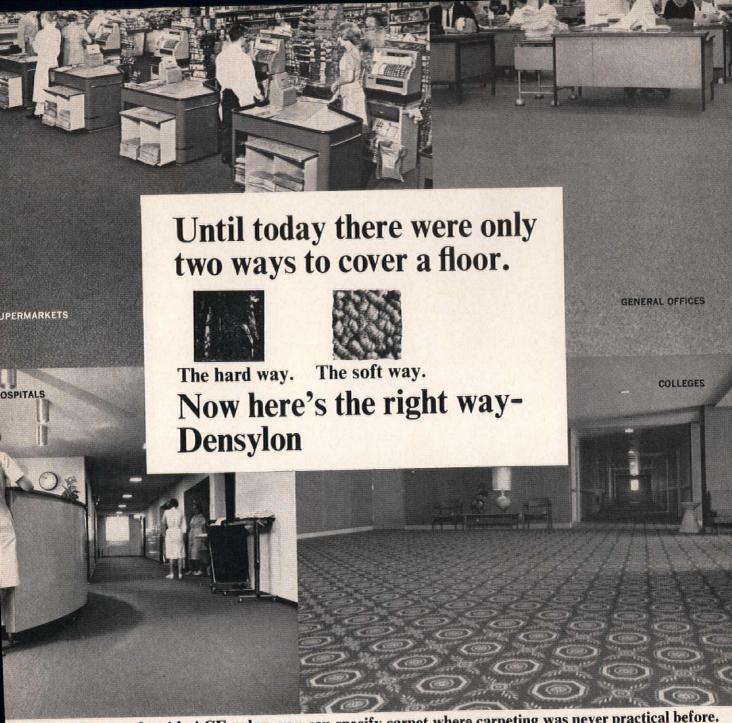












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VOL. XLV, NO. 6

Opinions expressed by contributors are not necessarily those of AIA ®

# Technology, Environment and Man

- Architecture and Industrial Research—Research in some areas can be collectively performed by the profession itself, and in others-in products, for example-influence can be exerted
- Outer Skins and Contact Environments-An architect and planner hopes "we have the guts, the technology and the enlightenment to scrap our millions of square miles of obsolescence in urban design and start over"
- What Irradiated Wood Means to the Architect-Technology not only creates new materials but strengthens the position of old ones, as this application of nuclear science demonstrates
- The Conservation of Man-More than man's welfare is wrapped up in conservation; indeed, his very survival is involved
- Total Design II-An extension of an earlier, well-received presentation which urges global open spaces
- Changing American Society-Man can make of his future a paradise "if he catches the vision of what it might be"
- "An Architect of the World"-An insightful analysis of the approach of Kenzo Tange, AIA Gold Medalist, 1966
- UD Workshop 10: A Program for Community Action-A summation of a key state conference on beauty and conservation, and a synthesis of ideas appropriate to the convention theme

# Denver '66

- 96 A State Steeped in History—From dwellings in cliffs to magnificent mansions built on gold and silver fortunes to the development of a defense headquarters beneath a mountain
- Magenta-A poem that says something about the price of gold
- Denver Reshapes Its Future-Slow to get started in urban re-100 newal, the city's varied efforts are now well underway
- Mile-High Course for the Mile-High City-Unprecedented growth foisted a planning program on Denver that is active, broadly supported and aimed where it should be-high
- Building Products Exhibit—A complete listing of exhibitors, what they will show and personnel who will be on hand
- Where the Action Is-A chatty description of Denver and its 121 environs, and a guide to what to do and where to go

# News Feature

128 Tange in Skopje—The Gold Medalist from Japan wins a competition in Yugoslavia with his plan for a quake-shattered city

# Departments

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**Unfinished Business** 

Cover: The Convention symbol and a scene in the Rockies

# LOOKING AHEAD TO JULY

The 1966 Honor Awards: For the third year in a row, the winners of the most distinguished award an architect can receive for design will be announced publicly during the AIA annual convention's Awards Luncheon, scheduled this year for Tuesday, June 28. In addition to photographs, the extensive coverage will incorporate plans, architects' statements and jury comments, with a more-candid-than-usual overall report on the state of architecture today.

Organizing for Design-and the Changing Client: An appropriate followup to the Honor Awards presentation, Garrett Eckbo takes a look at the interplay of the design professional, the decision-making process and the client. "The designer who wishes to design directly, or to remain in direct critical control of design, comes sooner or later to a point of decision," the landscape architect declares. "He must

either turn away work to remain in control of what he has, or expand and reduce his participation in it." But assuming that the client continues to expand his understanding of the design process, to the point where he becomes designoriented, how might design organization then respond? In his somewhat utopian approach, the author opens some windows on future possibilities.

Lessons from Copenhagen: The 11th Urban Design Worksheet merits particular attention in that the planning and design of Denmark's capital city represents one of the best examples of its kind. Of significance to the architect is the pervasive role of urban design in every aspect of the planning-from large-scale conceptual thinking to the smallest detailing. Illustrated by 19 sketches, the two-part article traces the evolution of the plan, dating back to 1947.

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# New Architects Information Service

A New Practice Aid: The AIA JOURNAL introduces this month, opposite the inside back cover, its Architects Information Service—what we sincerely hope will become a clearinghouse of data for the busy professional. Basically, it consists of a listing of materials—reprints, reports, documents, practice aids, technical data, books, etc.—which are readily available from the AIA and related sources, all consolidated for an at-a-glance review and for almost effortless ordering.

A Word About Reprints: Of particular interest to many of you will be the availability of selected articles in reprint form. Heretofore, you have had to rely on a limited supply of tearsheets or the placement of your own individual orders, with a minimum of 100 copies. Now, reprints from current issues will be offered free—one per reader—and from previous issues at a nominal cost. Information on quantity prices will be sent upon request.

**Binders and Things:** Among other items appearing in the initial listing, we would like to note three:

Binders—A new all-vinyl, less expensive model into which six issues easily snap for the growing number of readers who desire bound copies of the JOURNAL for convenience, easy reference and special care.

Membership Directory—A justreleased alphabetical listing of some 18,000 corporate members by surname and initials, address, chapter code and AIA or FAIA designation.

Product Literature—Complete and useful technical data that supplements the information manufacturers offer in their advertising messages.

A word about the latter. The importance of exchanging product information is dramatized by the advance publicity for the annual meeting of the American Society

for Testing and Materials which will be convening in Atlantic City while the AIA is assembling in Denver.

On the largest ASTM program ever scheduled will be some 300 speakers at 23 different sessions—covering both building and highway construction materials—which are expected to draw in the neighborhood of 4,000 registrants.

How It Works: For you the reader, the Architects Information Service is an uncomplicated procedure indeed; for the JOURNAL, it's a computerized operation that efficiently fulfills your orders. Along with each month's listing are duplicate cards—their foldout design facilitates easy checking—keyed to items and to products featured in advertisements throughout the magazine.

To order information you simply circle the numbers, on one of the cards, that correspond to key numbers that appear beside the listing and beneath advertisements in the particular issue. The second card is for your convenience in extending the use of the service to one of your interested colleagues. Each card will be valid for three months, i.e., the one in the June issue will be accepted through Aug. 31.

Open Season for Response: You are not only invited but urged to make good use of the new Architects Information Service. And we would also appreciate your candid comments on the service and suggestions on how we can make it more useful. The listings will change to keep pace with the profession.

Far-Flung Influence: In addition to reprint orders, magazines welcome requests for permission to reprint from their pages. Generally speaking, the JOURNAL is happy to oblige, provided the proper credits are given, of course. In recent months we have found our ma-

terial in a variety of publications and places, here and abroad. Some random samplings:

· Several selections in an Architecture Anthology compiled by Jeffrey Cook for a course at Arizona State University.

"How to Design Against Earthquakes" in the Indian Architect.

"The Highwayman Isn't Always Right!" in the Appraisal Journal.
Various references in the report

 Various references in the report of an investigation of office design by the Department of Building Science, University of Liverpool.

· "Guide to Better 'Crash' Construction" in Buildings.

· "Creativity in Design" in the Kansas Engineer.

 "Getting Along with Oneself" for a construction cost seminar sponsored by the Chicago Chapter AIA.

• The Urban Design Series, "The Architecture of Towns and Cities," in the Japanese Kentiku for architects and engineers.

A Handy Reference: Since information dissemination seems to be the order of the day, we would like to give mention to the Architectural Index for 1965 which has just come across our desk. Under one cover, the user will find a complete guide to eight magazines, including the JOURNAL (whose own index, by the way, is available free of charge through the Architects Information Service).

The Architectural Index offers data on specific buildings cross-indexed under location, general type and architect; on materials and methods of construction; on city planning and related topics. Priced at \$6 per copy, it is edited and published by architect Ervin J. Bell, P.O. Box 945, Sausalito, Calif. 94965. Back issues to 1950 are offered at \$5 each.

ROBERT E. KOEHLER Editor



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# **NEWSLINES**

'technology, environment, man'

# 98th Convention in Denver Will Focus on Technology and Ageless Concerns

The architect, 1966-scored on the one hand for not "keeping up" with technology, raked on the other for extracting too much technological license.

"The fact is," an architectural educator said recently, "that our technology has given the architect a power that is almost too big. Frank Lloyd Wright was content to invent a new type of architecture every 10 years, but today architects seem to be trying to invent a new type of architecture with every building they do."

One thing certain is that technology, in its ever-permeating way, is here to stay. It will be given no inconsiderable thought in Denver.

Architects gathered there for the annual convention of The American Institute of Architects June 26-July 1 will, in addition, turn their minds to two other matters of ageless concern-environment and -under the convention theme of "Technology, Environment and Man."

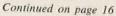
For convention highlights, see special calendar, pages 147, 148.

The convention also marks the transfer of Institute leadership from Morris Ketchum Jr. FAIA to Charles M. Nes Jr. FAIA, the election of other officers, the transaction of business, and the awarding of honors.

The highest such honor-the Gold Medal-will be conferred on the Japanese architect of world renown, Kenzo Tange. Two other



awards not previously announced: The Gateway Arch in St. Louis, which served as the graphic symbol for the 1964 convention and is to receive the Henry Bacon Medal for Memorial Architecture, and New York's Museum of Modern Art, recipient of the Institute's Ci-





Ketchum

Homsey



Kassabaum

# All Candidates Face Opposition in Institute Race

Convention delegates will have to select one of two nominees, as of presstime, for first vice president -president-elect of the Institute.

They will have to make a choice in filling other vacant offices too.

The nominees for first vice president are Robert L. Durham FAIA of Seattle and Llewellyn W. Pitts FAIA of Beaumont, Tex.

Running for the three vice presi-

dential openings are Samuel E.

Homsey FAIA of Wilmington, Del.,

George E. Kassabaum of St. Louis,

Robert H. Levison of Clearwater,

Fla., William G. Lyles FAIA of Co-

lumbia, S. C., and Harold T. Spitz-

nagel FAIA of Sioux Falls, S. D.



Durham











Spitznagel

his fellowship for design and public service, is chairman of the Commission on Public Affairs and a member of the Council of Commissioners.

Durham, whose fellowship is for design and service to the Institute, is chairman of the Council of Commissioners. He is a former chairman of the Commission on Architectural Design.



Allen



Thorson

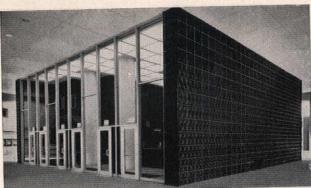
Candidates for secretary are Rex W. Allen FAIA of San Francisco and Oswald H. Thorson FAIA of Waterloo, Iowa, the incumbent. Nominees for director from regions which includes the newly

created New Jersey Region are: Rex L. Becker, Central States; Jules Gregory, New Jersey; Cabell Gwathmey, California; G. Harold W. Haag FAIA, Pennsylvania; George F. Harrell FAIA, Texas; H. Samuel Krusé FAIA, Florida; and

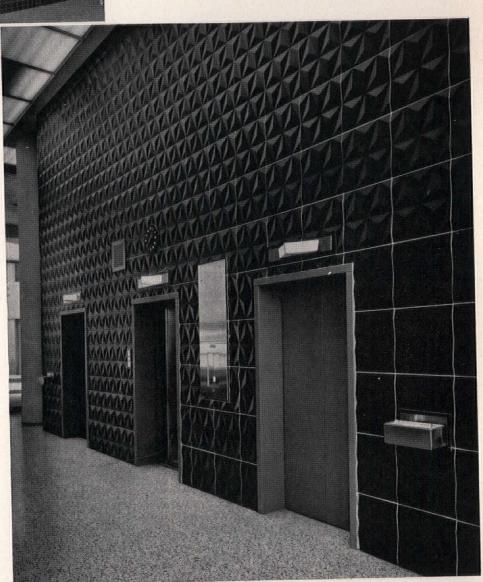
Jack D. Train, Illinois.

To be valid, votes must show selection of three vice presidents.

Much of the interest will center around the race for first vice president. Durham is a vice president and has served as a director from



Middlesex County Office Building, New Brunswick, N.J. Merchant & Seidel—architects. Gumina Building & Construction Co.—builders. Sculptured Pattern FS-100 in 1½" units 18" x 18" was specified in matte black for exterior facing at promenade and for interior facing in lobby and stairways.



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For the architectural effect, a series

of longitudinal striations were cast into the tower walls. These lines served to slim the building down by reducing its

visual mass.

The striations were achieved with panels. V-shaped chamfer strips were nailed to the panel faces at 8" centers. Panels were then hand set and moved upward in line as each pour of the con-crete was stripped for the entire 33' height of the tower.

Forms were handled individually since the small size of the towers didn't

warrant ganging.

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## Newslines from page 12

tation of an Organization with special commendation for its new Philip L. Goodwin Galleries.

Sixty AIA members, two of them posthumously, will be elevated to fellowships, bringing the total membership in the College of Fellows to 688, or 3.8 percent of the corporate membership of some 18,000.

Honorary Fellowships will be awarded to eight architects of as many countries, and Honorary Memberships will be conferred on six men. (Separate listings follow this story.) One of the latter will also be awarded posthumously; recipient James J. Rorimer, director of New York's Metropolitan Museum of Art, died May 11. He

Tange, examples of whose work and a discussion of whose approach form a major presentation in this issue, is the first architect of Japan to receive the Gold Medal and at 52 is one of the youngest recipients in the Institute's history.

Another Gold Medalist, the late Eero Saarinen, designed the stainless steel arch that symbolizes St. Louis' role as the historic gateway to the West. The Bacon Medal, honoring the memory of the 1923 Gold Medalist who designed many monuments but is best known for his Lincoln Memorial in Washington, will be accepted by the firm of Eero Saarinen & Associates, Hamden, Conn.

The Citation of an Organization commends the museum's continuing concern with architecture and man's physical environment. The citation takes particular note of he recent opening of the Goodwin Galleries that permit continual exhibition of material from the museum's Department of Architecture and Design. Arthur Drexler, director of the department, will accept the citation.

Among business matters the convention will act upon will be proposals for the expansion of the site for the new Institute Headquarters. Delegates will also select a first vice president, three vice presidents and a secretary, with all of the offices being contested.

Nes, of Baltimore, automatically assumes the presidency as first vice president.

The convention program consists of major seminars on each of the three subthemes of "Technology, Environment and Man." There will

also be two days of workshops, five on each running concurrently.

Economist J. Kenneth Galbraith will give the keynote address, and Harvard University President Nathan M. Pusey will deliver the second annual Edmund R. Purves Memorial Lecture at the US Air Force Academy.

Among host chapter events will be a night in historic Central City, including a command performance at the West's oldest opera house.

# Sixty to Gain Status Of Institute Fellow

Sixty Institute members will be elevated to the College of Fellows during the investiture ceremony at the Annual Dinner and Ball on Friday, July 1. Those to be honored, along with their chapters and achievements, are:

Allen, Rex Whitaker Northern California Service to the Profession

Amisano, Joseph North Georgia Design

Ballou, Louis Watkins Virginia Public Service

Barnes, Edward Larrabee New York Design

Biggers, James Joseph Walton West Georgia Education

Boney, Leslie N., Jr. North Carolina Service to the Profession

Bourne, Philip W. Boston Service to the Profession

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Chapman, Grosvenor Washington-Metropolitan Service to the Profession, Public Service

Clapp, James Ford, Jr. Boston Service to the Profession

Clark, Kenneth S. Santa Fe Service to the Profession

Continued on page 19



Mitchell Park Horticultural Conservatory, Milwaukee County Park Commission. Donald L. Grieb & Assoc., Architects; Ammann & Whitney, Structural Engineers; complete manufacture and contract for erection and glazing by Super Sky Products Co., Thiensville, Wis.; ¼" Polished MISCO supplied by Lurie Patek Glass Co., Milwaukee.

This strikingly attractive installation is a classic example of the design flexibility of Polished MISCO (wire) glass. Contributing dramatic impact while achieving functionality, Polished MISCO demonstrates its advantages of chemical stability, perma-

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A skylight spire of COOLITE heat absorbing wire glass appears to reach heavenward in this lovely edifice. Glare-reduced by our special process, blue-green COOLITE glass admits softly filtered daylight for the benefit of worshipers . . . contributes eye-soothing comfort while affording the protection for which Mississippi wire glass is widely recognized.

When the control of human environment is a requisite, consider COOLITE heat absorbing glass. Available at better distributors.



¼' Luxlite COOLITE MISCO, glared - reduced, installed in Calvary Baptist Church, San Bernardino, Calif. • *Architect*: Wm. E. Blurock & Assoc., Corona Del Mar, Calif. • *Gen. Contractor*: Cal Construction Co., San Bernardino, Calif. • *Glass*: Jack Tyre Glass Co. • Prefabricated skylights by Aluminex Corp.; installation by Royal Mechanical Contractors, Inc., San Bernardino.



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## IISSISSIPPI GLASS COMPANY



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Newslines from page 16

Crimp, Frank

Boston

Service to the Profession,

Public Service

de Moll, Louis

Philadelphia Service to the Profession

DeVries, Bernard J.

Grand Valley, Mich.

Public Service

Diehl, Gerald George

Detroit

Service to the Profession

Drew, Roy Morse

San Diego

Design

Eickenroht, Marvin

San Antonio

Literature

Elmore, James Walter

Central Arizona

Education

Ferendino, Andrew J.

Florida South

Public Service

Freeman, William Wallstone

Vermont

Service to the Profession

Froehlich, Arthur

Southern California

Design

Fry, Charles Eugene

Southern California

Service to the Profession

Gilbertson, Victor C.

Minneapolis

Service to the Profession

Goldberg, Bertrand

Chicago

Design

Graham, Bruce J.

Chicago

Design

Granger, Charles Thomson, Jr.

(posthumous)

Austin

Design

Haag, G. Harold W.

Bucks County, Pa.

Service to the Profession

Haible, William E.

Boston

Design

Hardison, Donald L.

East Bay, Calif.

Service to the Profession

Hayes, Thomas Thurman, Jr.

North Carolina

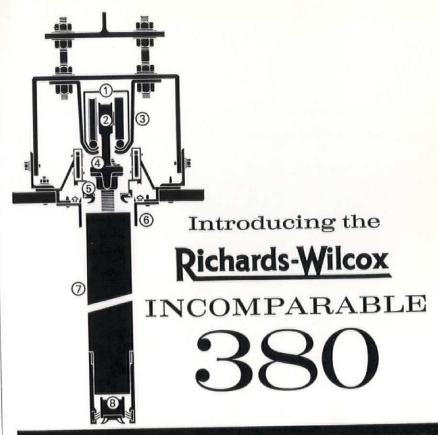
Design

Hemphill, James Calvin, Jr.

North Carolina

Service to the Profession

Continued on page 22



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opens and closes so easily

even a 90 lb. teacher can do it

... effortlessly.

# The ultimate in simple operation and sound control

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- R-W special design hanger for ease of operation. Four sealed ball bearings, plus thrust bearing, virtually eliminates starting or rolling friction.
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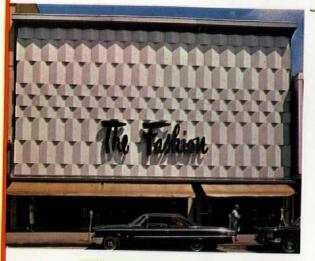


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For more technical data, circle 218 on information card

19

# IMAGINATIVE DESIGNS IN PORCELAIN ENAMEL





Facade of The Fashion in Lafayette, Indiana, with its deeply formed porcelain panels providing an interesting pattern of light and shadow, gives the two adjacent buildings a unified modern appearance for their common tenant.

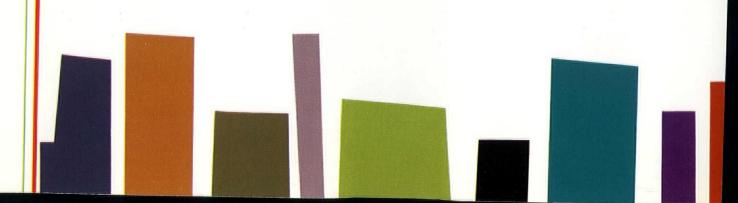
Building: The Fashion, Lafayette, Indiana Architect: E. H. Brenner, AIA, Lafayette, Indiana Porcelain Enameler: Fenestra Incorporated, Davidson Enamel Products, Lima, Ohio Neither of these buildings projected the new image desired by its occupant. The facades had become "dated," and worn with age. One was actually two buildings with a common tenant. The other failed visually to capitalize on its spectacular length.

After establishing the structural soundness of the buildings, the architect in each case decided on a program of modernization utilizing the design potential of versatile porcelain enamel. Results are obvious. Facades of both structures have a handsome distinctive appearance consistent with the occupants' business.

Architects all over the country are using the color, form, and light weight of porcelain on Armco Enameling Iron to give old buildings new personalities. For complete information on the multiple advantages of porcelain enamel in modernization or new construction, contact an architectural porcelain enameler or write Armco Steel Corporation, Department E-2156, P.O. Box 600, Middletown, Ohio 45042.

# ARMCO STEEL





# GIVE OLD BUILDINGS NEW PERSONALITIES





Basket weave porcelain enamel facade on The Fox Co. building in San Antonio, Texas, not only gives the building a progressive personality, but makes it appear even lower and longer. In fact, fifty feet were added to each end of the building to provide upper office space with covered parking beneath the extensions.

Owner: Fox-Stanley Photo Products, Inc., San Antonio, Texas Architect: Wallace B. Thomas, San Antonio, Texas Porcelain Panel Engineers and Erectors: J. E. Bourland Company, Dallas, Texas Porcelain Enameler: Industrial Enameling, Division of Industrial

Electric, Inc., Bay St. Louis, Mississippi

# = A-12 AIA C\* We'll be in Denver with...GPe +

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Booth A-12, AIA Convention. New Jersey see us, y'bear?

Newslines from page 19

Hilfinger, Dean F. Central Illinois Service to the Profession

Iglesias, Santiago, Jr. (posthumous) New York Service to the Profession

Ives, Philip New York Design

Kelsey, Floyd Lamar, Jr. Colorado Design

King, Sol Detroit Science of Construction

Lethbridge, Francis D. Washington-Metropolitan Design, Service to the Profession

McCallum, Angus Kansas City Public Service

McGaughan, A. Stanley Washington-Metropolitan Service to the Profession

Merrill, William D. Hawaii Design

Morgridge, Howard H. Southern California Design, Service to the Profession

Mott, Ralph Oliver Arkansas Service to the Profession

Pilafian, Suren Detroit Service to the Profession

Price, Robert Billsbrough Southwest Washington Design

Richardson, Ambrose Madison Central Illinois Design, Service to the Profession Rigolo, Arthur

Service to the Profession Ritchey, Dahlen Klahre Pittsburgh Design

Rosa, Clarence Henry Mid-Michigan Public Service

Rothschild, Bernard B. North Georgia Service to the Profession

Senseman, Ronald Sylvester Potomac Valley, Md. Service to the Profession

Sweeney, John David St. Louis Service to the Profession

Continued on page 26

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# DIRECTLY HEATS PEOPLE, FLOORS AND EQUIPMENT FIRST...NOT THE AIR

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Save up to 50% the costs of ordinary heating systems Initial cost of heaters is low. Space-Ray requires no ducts or vents; no in-plant wiring; installation is simple, inexpensive. Space-Ray is being installed in a wide variety of size and type buildings, all over the country, for 25∉ per sq. ft. — and less. No moving parts; little or no maintenance. A. G. A. approved. Operates on Natural, L.P., Manufactured or Mixed Gases. Each unit 40,000 BTU.



SPACE-RAY CORPORATION 306 W. TREMONT AVE., CHARLOTTE 3, N. C.

Circle 219 on information card

# Building Cost Saving of \$35,000, Design Freedom and Greater Space Utilization Are All Benefits of Electric Heat in Apartment Complex



NAUGATUCK, CONNECTICUT—Oak Terrace at Naugatuck, Connecticut, is one of six moderate-rental housing projects financed by the state of Connecticut and built in Naugatuck under the supervision of the Naugatuck Housing Authority. One major difference between Oak Terrace and the other five projects is that Oak Terrace is heated electrically—a design decision that saved about \$35,000 on construction costs.

A less tangible but equally gratifying benefit of electric resistance heat according to architect Henry T. Moeckel Jr., was the freedom of design it offered. This was an important consideration, Moeckel says, because his plan for Oak Terrace called for a series of ten one-story buildings housing a total of thirty-six  $2\frac{1}{2}$  room and fourteen  $3\frac{1}{2}$  room apartments all to be occupied exclusively by elderly people. The tall chimneys required by a central flame fuel system would have detracted from the appearance of the buildings because of the low

roof line and valuable floor space would have had to be allocated for the boiler rooms. Both of these design problems were eliminated with electric resistance heat and as a result, Moeckel's one-story buildings are architecturally attractive and perfectly suited to the hilly, heavily-wooded tract of land. Each tenant has a separate outside entrance and the feeling of having his own "home." An eleventh building, also one-story, serves as a community center.

The electric resistance heating system at Oak Terrace consists of porcelainized radiant heating panels located beneath the windows in each room. Each room can be individually temperature-controlled year-round. Heating costs are included in the modest monthly rental and, Moeckel points out, have been running below the original estimate.

In the near future, eight more buildings containing a total of 40 apartments will be added to Oak Terrace. "And, of course", Moeckel adds, "they, too, will be heated electrically."

## GENERAL DESCRIPTION: Area: 22,846 sq ft

Volume: 182,768 cu ft Number of floors: one Number of buildings: 11

Types of apartments: 36 21/2-room 14 3½-room

# CONSTRUCTION DETAILS:

Glass: double

Exterior walls: brick veneer (R/13). U-factor: .071

Roof or ceilings: asphalt and dry wall (R/24). U-factor: .041

Floors: tile on slab

Exposed wall area: 18,430 sq ft

Glass area 4,900 sq ft

# **ENVIRONMENTAL DESIGN CONDITIONS:**

Heating:

Heat loss Btuh: 640,269 Normal degree days: 6,000

Ventilation requirements: 3,000 cfm Design conditions: 0°F outdoors; 80F indoors

Cooling: None

## LIGHTING:

Levels in footcandles: 10-30 Levels in watts/sq ft: 1-2

Type: fluorescent and incandescent

## HEATING SYSTEM:

Porcelainized electric radiant heating panels with individual room controls are installed beneath the windows in each room.

# **ELECTRICAL SERVICE:**

Type: overhead

Voltage: 120/240v, 3 phase

Metering: secondary (apartments are metered individually although cost of heating is included in the monthly rental)

# CONNECTED LOADS:

Heating 314 kw Ventilation 5 kw Lighting 25 kw Water Heating 103 kw Cooking 400 kw Other 11 kw TOTAL 858 kw

# INSTALLED COST:\*

Please send the complete series of Electric Heating

Histories as they become available

0

ı	General Work	\$249,591.21	¢10 00/ #
	Plumbing	49,700.00	\$10.92/sq ft
	Heating		2.18/sq ft
	Electrical (Total)	22,500.00	.98/sq ft
	Cita I	39,000.00	1.71/sq ft
	Site Improvement	70,300.00	3.07/sq ft
	Community Building	30,408.00	1.33/sq ft
	Appliances & Equip.	15,000.00	.66/sq ft
	TOTAL \$	476,499.21	\$20.85/sq ft
	*Building completed	July 1964	420.00/34 It

HOURS AND METHODS OF OPERATION: 24 hours a day, seven days a week

**OPERATING COST:** 

Period: 9/64 through 8/65 Actual degree days: 6,240

Average kwh for 21/2 room apt: 9,935\* Average kwh for 3½ room apt: 11,748\*

Average cost for 2½ room apt: \$206.\* Average cost for 3½ room apt: \$236.12\*

Average cost per kwh for 2½ room apt: 2.07 cents\*

Average cost per kwh for 3½ room apt: 2.01 cents\*

\*For total annual electrical usage

## UNUSUAL FEATURES:

In these compact apartments, the electric radiant panel heating system takes up no floor space. Another important advantage is the fact that each room has its own thermostat so that occupants can dial the exact degree of heat desired. This is particularly desirable in housing for the elderly.

# REASONS FOR INSTALLING ELECTRIC HEAT:

Electric resistance heat offered these important advantages: lowest total owning and operating costs, greater safety, cleanliness and convenience, and freedom of design. Unlike central flame fuel systems, electric resistance heat doesn't require boiler rooms, chimneys, piping or duct work, and thus saved approximately \$35,000 on construction costs.

# PERSONNEL:

Owner: Naugatuck Housing Authority Architect: Henry T. Moeckel, Jr., AIA Consulting Engineers: Technical Design Associates

General Contractor: P. Francini, Inc. Electrical Contractor: Carrier Electric Company Utility: Connecticut Light & Power Company

# PREPARED BY:

William Dean Clarke, Heating Supervisor Western Division, and Ernest Englund, New Homes Representative, Connecticut Light & Power Company

## VERIFIED BY:

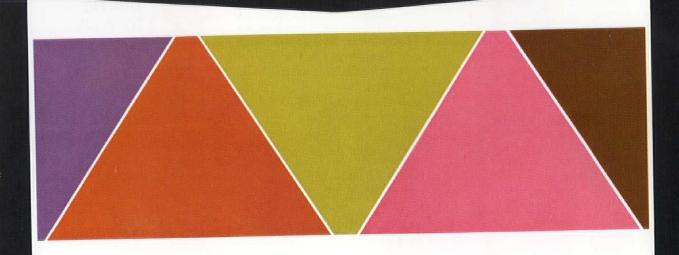
Henry 1. Norchel. Ja.

Henry T. Moeckel, Jr., AIA

The Consulting Engineers Council USA, has confirmed the above categories of information as being adequate to provide a comprehensive evaluation of the building project reviewed.

NOTICE: This is the thirty-ninth in a series of case histories which will cover all categories of buildings. Some of these histories will be published in leading trade and technical journals and some will not. If you wish to

receive all histories as they become available, please fill out the strip-coupon at the left and mail it to Electric Heating Association, 750 Third Avenue, New York, N. Y. 10017



# SHADES OF DARWIN

Are design demands like adaptability and permanence really incompatible? In these times, why not buildings with adjustable rooms, functioning in an unrestricted, highly divisible yet controllable, air-light universe? The obstacle has been cost, until a most unusual performance specification was written for new schools in California\*. This document required structuralmechanical suppliers to bid as collaborating groups, and to show integrated, compatible systems. One of the successful solutions is Space Grid™—a joint development by a halfdozen national companies\*\*. Space Grid also incorporates several mechanical options beyond the spec, extending its application considerably further than institutional construction.

In this system, the structural-heating-cooling-lighting-ceiling-partition systems become a single organism meeting high environment criteria in every classification. With these it allows swift, radical and convenient rearrangement of the comprehensive room plan. Space Grid adds the dynamic dimension of adaptability to room usage, and thus wards off obsolescence indefinitely. Survival of the fittest, you might say. Fast construction, single responsibility and better component performance are natural advantages of this approach.

Space Grid does not poke its nose into the design solution; nearly all its elements lie neatly concealed inside the service envelope above ceiling plane. For details see Sweets File, 2A/Bu. Or write direct to Architectural Systems Department, Butler Manufacturing Company, 7601 East 13th Street, Kansas City, Mo. 64126

\*By the School Construction Systems Development project of the Educational Facilities Laboratories.

\*\*Butler Manufacturing Company, E. F. Hauserman Company, Lennox Industries Incorporated, Owens-Corning Fiberglas Corporation, and other cooperating manufacturers. Space Grid is a trademark of Butler Manufacturing Company. SPACE GRID

Newslines from page 22

Tarapata, Peter

Detroit Design

Taylor, Harwood

Houston

Design

Urbahn, Maximilian Otto

New York

Design

Weber, Wayne McClellan

Central Southern Indiana Service to the Profession,

Public Service

Weller, Harry C.

Spokane Service to the Profession

White, Theo Ballou

Philadelphia

Literature

Wong, Gin Dan Southern California

Design

# Eight Honorary Fellows; Six Honorary Members

Eight architects from as many countries and six Americans will receive Honorary Fellowships and Honorary Memberships.

HONORARY FELLOWSHIPS—

The following distinguished architects will be made Honorary Fellows during the investiture ceremony:

Bakema, Jacob B.

Netherlands

Erskine, Ralph

Sweden

Ervi, Aarne

Finland

Lasdun, Denys Louis

England

Roth, Alfred

Switzerland

Seidler, Harry

Australia

Venne, Gerard

Canada

Zehrfuss, Bernard Henri

France

HONORARY MEMBERSHIP—

For "distinguished service to the profession," the following men will be made Honorary Members at the Inaugural Ceremony on Monday, June 27:

Bush-Brown, Albert

President, Rhode Island School of Design

du Pont, Henry F.

Member of the White House Preservation Committee

Flowers, John G.

Executive director of the Texas Society of Architects AIA, the Texas Architectural Foundation and executive secretary of the Texas Board of Architectural Examiners

Gores, Harold Bismark

President of the Educational Facilities Laboratories, Inc.

Logue, Edward J.

Development Administrator of the Boston Redevelopment Authority

Rorimer, James J.

(posthumous)

Director of the Metropolitan Museum of Art in New York City

# President Asks Action On Demonstration Bill

President Johnson was calling for quick passage of "our first national attempt to apply a bold and forward looking concept to our urban renewal programs."

The President was talking about his Demonstration Cities program. He emphasized, as he spoke in San Antonio, that the program is for little as well as big cities.

And in Cleveland on the very same day in May, Vice President Humphrey warned that small cities too face the "converging forces of . . . growth and decay . . . slums, urban blight, traffic and parking problems.'

Reason for the concerted emphases: Many rural and small city lawmakers had been charging that all of the money would be funneled into big city slums. This appeared to be one factor in the slow legislative progress of the program firmly endorsed by the AIA. As Mr. Johnson spoke, the bill was tied up in the housing subcommittees of the House and Senate Banking and Currency Committees.

One press report had it that Congressional and White House sources were expressing private doubts the legislation would pass this year. Thus it appeared the administration was mounting an offensive to overcome the resistance.

The act would authorize \$2.3 billion in supplemental federal funds to encourage model redevelopment projects in some 70 cities.

The AIA in Congressional testimony said it was "extremely enthusiastic" about the program.

The act's provision for a federal coordinator who would serve as a middleman between local officials and the Department of Housing

Continued on page 30



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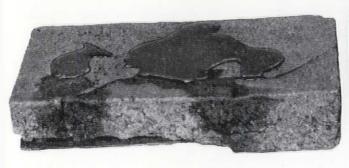
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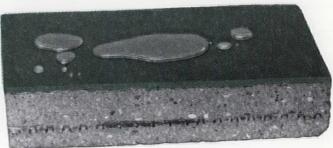
WISCONSIN WISCONSIN S & S SALES 404 North Second, Milwaukee

GENERAL ELECTRIC

26

# Concrete disintegrates...





# ...G-E Silicone Traffic Topping doesn't!

Let it snow and rain. Let it freeze and thaw.

General Electric's new silicone rubber Traffic Topping protects walkways, ramps, parking areas, porches, swimming pools, balconies and other traffic areas against moisture damage.

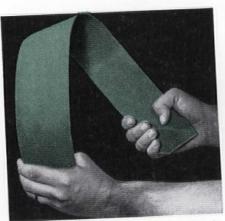
Once on, Traffic Topping stops costly maintenance. It won't let water in, yet "breathes" to let any moisture out. Because the base material is silicone rubber, the most durable, weatherproof elastomer known (the same as Silicone Construction Sealant), Traffic Topping stays flexible and moisture proof.

Traffic Topping won't crack, it's not brittle, and it forms a tough bond to concrete, wood, steel and other floorings. It's remarkably skidproof and is not damaged by salt. Grease and oil are easy to remove. It never needs painting.

To date, no other outdoor coating has been able to stand up to weather and wear for very long. Traffic Topping will. For many years. On patios, steps, garages, runways, for instance. Anywhere there's water and traffic. For complete specifications, test results, application data, color selection and local distribution, please write Section EA6201, Silicone Products Dept., General Electric Co., Waterford, N.Y. 12188.



Quick, easy application. Just prime the surface, add catalyst to Traffic Topping, mix and trowel on. No expensive equipment needed. Only one coat is usually required, so application costs are low.



Permanent flexibility. Traffic Topping is resilient...expands and contracts without cracking even at temperatures as high as 300°F, as low as -65°F.



Safe, anti-skid surfaces. Even when wet, Traffic Topping provides superior traction. Excellent wear and abrasion resistance make it ideal for heavy traffic areas.



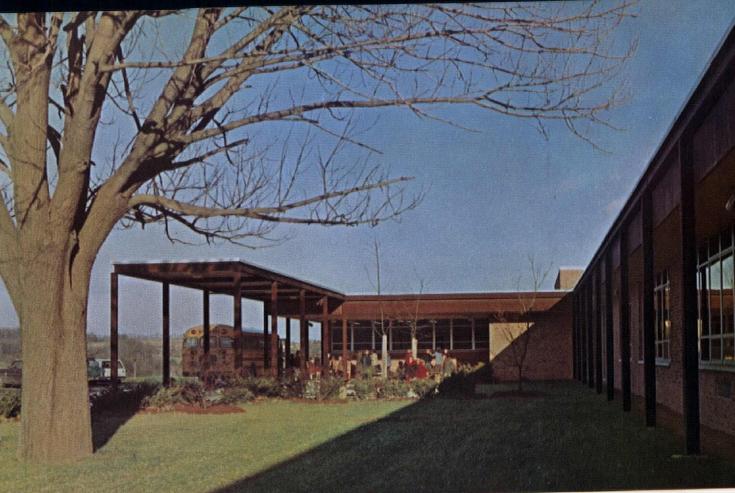
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The longer it weathers the richer this steel's deep-brown oxide coating becomes. And what a remarkable coating it is. Closely grained and tightly adherent, it builds up to about the same thickness as a coat of paint. It inhibits further corrosion of the steel. It heals its own wounds.

The full potential of this material can be realized only by careful design considerations. We will be happy to review these with you when you plan to use Weathering Steel. Simply call or write our nearest sales office.

> BETHLEHEM STEEL BETHLEHEM STEEL CORPORATION, BETHLEHEM, PA.

(Left Page) BRANCH BANK, CHESAPEAKE, VA., VIRGINIA NATIONAL BANK.

Architect: Oliver & Smith.

Engineer: Fraioli, Blum & Yesselman. General Contractor: W. B. Meredith, II, Inc.

Roofing Contractor: Virginia Sheet Metal & Roofing

Company of Norfolk, Inc.

Steel Fabricator: Globe Iron Construction Company, Inc.

(Right Page) FRENCH CREEK VALLEY ELEMENTARY SCHOOL,

Coventryville, Pa. Owen J. Roberts School District. Architect: Wolf & Hahn. Engineer: Quentin Bowers.

General Contractor: H. C. Grau Co. Steel Fabricator: W. H. McArdle & Son. and Urban Development was complimented by the Institute. But it was suggested that he be closely associated with the urban information center, part of the Urban Development Bill.

The AIA supported the purpose of the latter which is aimed at encouraging the states and regions to perform effective comprehensive metropolitan planning and programming.

The information centers would

assemble, correlate and disseminate information on the physical, social and economic problems of urban areas and on governmental programs attempting to solve them.

"We believe the federal coordinator position contemplated by the Demonstration Cities Act should be closely associated with, or part of, the urban information center. Such an approach would give both programs the greatest chance for success and literally prove to be demonstrations," the Institute said.

people

# Aspen Humanities Award Is Won by Doxiadis

Dr. Constantinos Doxiadis is the third winner of the \$30,000 Aspen Award in the Humanities.

Doxiadis is best known for his concept of "ekistics-the science of human settlement." Within its framework he has gathered together world leaders from the natural and social sciences and the humanities, drawing from the various disciplines contributions toward more amenable group living.

Doxiadis Associates, headquartered in Athens, Greece, has undertaken large rural, urban renewal and housing projects in numerous countries including the United States.

The Aspen Award of the Aspen Institute of Humanistic Studies is described as the largest tribute in humanistic achievement offered anywhere in the world. The 1964 award went to British composer Benjamin Britten and last year's was given to modern dancer Martha Graham.

Leon Chatelain Jr. FAIA, Washington architect and a past president of the Institute, has been named by President Johnson as chairman of a commission to seek ways of making buildings more accessible to crippled persons.

The 15-member National Commission on Architectural Barriers will conduct a study authorized last year by Congress in an amendment to the Vocational Rehabilitation Act.

The commission will study what is being done to eliminate such barriers that impede access or use of facilities in buildings of all types and make recommendations for further action needed to achieve access by the handicapped.

► Ulrich Franzen AIA is serving as president of the Architectural League of New York for 1966-67. Ronald Beckman, vice president of George Nelson Co., is director of the new Research and Design Center in Providence, R. I.

The Institute will investigate ways in which design affects the human spirit. In practice, its activities will range from design for instruments and graphics to alternate uses of public spaces in urban areas. It will also serve clearing house, consultation and educational roles.

Arthur Rigolo FAIA of Clifton, Continued on page 32

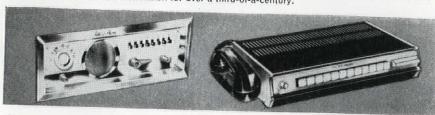


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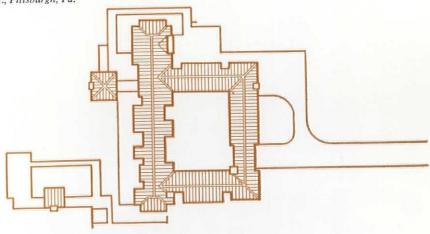
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# WHATEVER HAPPENED TO THAT "MACHINE FOR LIVING"?

However rhetorical the question, it at least reflects our personal gratification that the work of so many outstanding residential architects is increasingly oriented toward elegance, imagination and environmental harmony. And we are even more gratified—albeit not unselfishly—by the high percentage of these architects who have recently specified Follansbee Terne on major projects. For Terne, its functional integrity validated by two centuries of use, is unique among roofing materials in that it provides both form and color at relatively modest cost.



"STORNOWAY", Ligonier, Penna.—featured in 1965 RECORD HOUSES. Architect: Winston Elting, AIA, Chicago, Illinois Roofing Contractor: Miller-Gyekis Inc., Pittsburgh, Pa.





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# Cheney FASCIA PANELS

# Factory prefabricated in colored aluminum

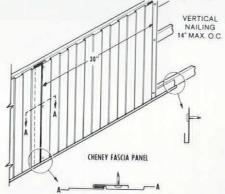


Cheney Fascia Panels are recommended for Deep Fascias, Floating Roofs, Spandrel Areas, Vertical Panels, Parapets and Soffits.

**NEAT APPEARANCE:** Available in cream, green, black, white and red baked enamel on aluminum, as well as in mill-finished metals. Cheney Fascia Panels are compatible with other materials and with your color scheme. A trim and attractive appearance is provided by their continuity of design, unbroken by exposed battens.

**WEATHER-TIGHT JOINTS:** Automatic expansion joints and blind nailing form an absolutely weather-tight joint. Moreover, Cheney Fascia Panels may be applied to your choice of material, insulation, or free breathing.

SIMPLE, LOW-COST INSTALLATION: Panels are carefully prefabricated in standard 30" net lengths and in heights from 8" to 72". They are delivered to contractor complete with bottom channel closure strips. Installation is simple, fast, low in cost.



Consult Section 8g/Che in Sweet's or write to us direct for comprehensive new catalog which illustrates and describes all Cheney prefabricated products including aluminum gravel stop and fascia panels in color.

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For more technical data, circle 223 on information card

Newslines from page 30

N. J., is a one-man AIA task force for the development and coordination of education programs at the primary and secondary level to increase the awareness, understanding and concern for the visual environment.

▶ James W. Rich AIA, in practice in Nashville, Tenn., the past six years, is now assistant to the executive director, National Council of Architectural Registration Boards.

Dick Thevenot, public affairs manager of the Shreveport, La., Chamber of Commerce, has been named executive director of the Louisiana Architects Association.

► Kenzo Tange has been presented with the President's Medal of the Architectural League of New York for excellence of design.

The presentation, made at a formal dinner, marked the first time since 1956 that the medal has been awarded.

▶ Daniel P. Moynihan, former assistant secretary of labor and author of an article appearing in the April AIA JOURNAL, has been named to three posts at Harvard University. He will become professor of education and urban politics, director of the Joint Center for Urban Studies of MIT and Harvard and a member of the Kennedy Institute of Politics.

Paul R. Williams FAIA of Los Angeles received a Merit Award from the University of Southern California's General Alumni Association. He was honored for "worthy achievement in a field of endeavor reflecting credit upon USC and each of its alumni."

► Robert B. Taylor, director of the Structural Clay Products Institute's Research Division, the Structural Clay Products Research Foundation, since it was established 16 years ago, has resigned. He has become executive vice president of Mapleton Development Inc., Canton, Ohio.

# Stack or Spread? Time To Decide: Freeman

"The built-in joys of rural community life—in terms of ease in travel and communication, cooperative spirit, respect for individual dignity, and closeness to the beauties and the recreational facilities provided by nature itself—are as abundant as its agriculture."

Secretary of Agriculture Orville L. Freeman has been talking this way. Testifying before the Senate

Continued on page 35

# Perlite roof decks are exciting. Perlite insulating concrete isn't. It just lays there—forever.

Perlite concrete makes exciting roof decks a reality without any loss of functional properties. Unlike rigid insulating mate-

rials, its design properties are readily adaptable to your specific project. Thickness can be varied to pro-

vide simple drainage slopes or dramatic shapes. Superior thermal efficiency and strength make perlite preferable to other cast-in-place materials.

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often permit substantial insurance savings. It's been insulating all sorts of roof decks for 17 years. When you consider all data, you too will specify perlite insulating concrete roof decks. For information, write to PERLITE INSTITUTE INC., 45 WEST 45TH STREET, NEW YORK, N.Y. 10036.





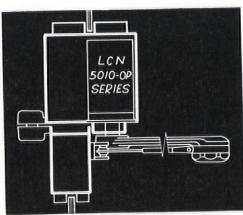
#### LCN DOOR CLOSERS

No matter how fine the building, how interesting its design, all its doors need

The right closer protects door, hinges and frame from the destructive effects of winds and interior drafts. Its smooth control also helps visitors to operate the door safely and without undue effort.

For the entrance pictured here, LCN 5010 closers are well suited. The powerful closing unit is hidden in the overhead frame. The double lever arm transmits power most effectively.

LCN's forty-year experience in making nothing but door closers is reflected in the 5010 series. Its high quality and record of low maintenance tend to assure lowest long-run cost to the user.



Detail at head for LCN overhead concealed closer shown in photograph

Full description on request or see Sweet's 1966, Sec. 19e/Lc

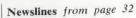


LCN CLOSERS, PRINCETON, ILLINOIS

A Division of Schlage Lock Company

Canada: LCN Closers of Canada, Ltd. P. O. Box 100, Port Credit, Ontario

PHOTO: Oberlin College Conservatory of Music, Oberlin, Ohio; Minoru Yamasaki and Associates, Architects



Agriculture and Forestry Committee, he noted that by 1975 the country will have a population of 225 million and he commented:

"Whether we force 225 million Americans to stack up, or enable them to spread out, is a decision our people, our business and industrial and service communities, and every level of government, faces right now."

Freeman thinks industry would benefit from country locations and is said to be in earnest in his advocacy of population dispersal, according to press accounts.

"If the present trend in the placement of people continues," he said, "there will be just as many of us in 216 cities two decades from now as there were in the entire nation in 1960 . . . enough more people in cities to provide five more New Yorks or 27 more Washingtons."

He said crowding into cities will tend to minimize programs aimed at curing the shortcomings of urban America.

#### All-Plastic Building Seen 'Just Around Corner'

Forecasts of greater use of plastics in the building industry keep cropping up. One recent prediction envisages all-plastic buildings "just around the corner."

George A. Kennedy, a Chicago structural engineer, told a Cleveland audience that structural plastics are making a definite impact.

"In 10 years," he said, "plastics will account for more than 15 percent of exterior wall materials. Within the next decade the construction industry may be using 150 million pounds of vinyl polymers per year-a 100 percent increase over current volume."

Growing public demand for more economical buildings is spurring the greater use of plastics, the consult-

ant explained.

"New plastics combine esthetic appearance with amazing low cost," Kennedy said, adding: "an allplastic structure may be just around the corner."

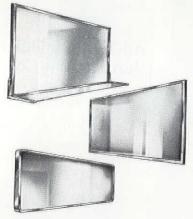
Meanwhile, the National Association of Home Builders said nylon shutters, vinyl flooring with foam backing and one-piece fiberglass tub and shower units will be among the year's innovations in building products. Easy maintenance is the big news, says NAHB.

Continued on page 36

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Newslines from page 35

#### The Guggenheim Backs Up Frank Lloyd Wright

The design of the Frank Lloyd Wright stamp (issuance date June 8 in Spring Green, Wis.) was a Taliesin project.

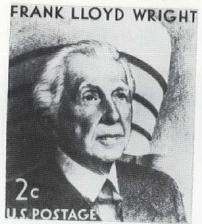
The Post Office Department invited the Frank Lloyd Wright Foundation to submit designs. Patricia Amarantides, a Taliesin West student, designed the stamp with Mrs. Frank Lloyd Wright and a number of students suggesting modifications.

Basis for the Wright portrait is a photograph by Blackstone-Shelburne, New York, made in 1952 when Wright filed his plans for the Guggenheim Museum.

The Guggenheim, Wright's only building in New York, forms the stamp's background.

The two-cent, vertical stamp which is being printed in blue is the fifth in a "Prominent Americans" series. It is being issued in panes of 100.

Spring Green is the location of



Taliesin East which Wright, who died in 1959, established in 1932. Six years later he built Taliesin West near Scottsdale, Ariz.

His widow continues his work as president of the foundation under which young apprentice architects are trained in his methods at the studio-workshops.

#### Slayton Directs Center For Urban Solutions

Timing is everything, it is often said, and so it would seem for William L. Slayton.

The Department of Housing and Urban Development and the new Urban America Inc. (having merged with ACTION Council for Better Cities) came into existence about the same time.

The emergence of the department meant the functions of the Urban Renewal Administration, the largely independent agency Slayton headed, would be directed from the top of HUD.

Rumors had it that Slayton, 49, would leave the department. And so he did—to direct a new Urban Policy Center to be established in Washington by Urban America.

The center, Urban America said, will provide a forum for "discussion by the nation's most able and experienced people of the goals that we should have as a nation for all of our urban areas."

Slayton and the center staff will talk with civic leaders from all parts of the nation, developers and other businessmen, public officials, professionals and others to define goals for cities as well as public and private policies and programs for achieving these goals, Urban America President Stephen R. Currier explained.

Slayton is one of the pioneers in urban renewal, dealing with it in Milwaukee before the national program was authorized in 1949.

His departure left in doubt the future of only one other Housing and Home Finance Agency commissioner, Marie C. McGuire of the Public Housing Administration.

#### Japan Switches while US Is Called Metric Loner

Japan recently adopted the metric system for all measurements.

Long taught in Japanese schools, the system heretofore was compulsory only in the sale of food.

Taking note of the Japanese switch, Sen. Maurine B. Neuberger declared on the Senate floor:

"America is the last great nation to maintain the posture of the proverbial ostrich over adopting a rational system of measurement. It does seem strange that we should commit our armed might to staking southeast Asia to a free future, yet court commercial isolation because of an antiquated set of weights and measures."

The Senate last September adopted a bill for a proposed metric study, but the House has deferred action.

Continued on page 40

### Inland has big openings for live wires!



#### (in its new 11/2" NF Hi-Bond Celluflor")



One million square feet of Inland 11/2" NF Hi-Bond Celluflor will be erected in the new 60-story First National Bank Building, Chicago.

Architects and Engineers: C. F. Murphy Associates and the Perkins & Will Partnership.

General Contractor: Gust K. Newberg Construction Company.

New 11/2" NF Celluflor has big 9-sq. in. cells; each 24"-wide. 11/2" NF panel provides greater total raceway capacity. Large 4"-diameter hand-holes make it easy to feed electrical power and communications wires into the raceways-easy to pull wires up to connect to service outlets installed anywhere along the length of the Celluflor.

New NF panels are a full 11/2" deep - and can be blended with any standard Inland 11/2" deck profile. Space between floors is reduced; savings in building height and weight often are significant.

Hi-Bond lugs formed into the webs

of 11/2" NF Celluflor panels provide a positive lateral and vertical mechanical bond between steel and concrete, producing an exceptionally strong floor system. It is fire-rated by Underwriters Laboratories, having withstood ASTM standard E-119 floor tests, including both optional hose stream and double-loading tests. Adding Inland shear connector straps provides the extra strength and economy of composite slab/beam construction.

For more information about new Inland 11/2" NF Celluflor, write today for catalog 273 to Inland Steel Products Company, Dept. F, 4069 West Burnham St., Milwaukee, Wis. 53201.

Inland Steel Products (MAND)





What do fancy cars and space ships have in common with Simmons new line of dormitory furniture?

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He's one of the country's top designers. A lot of automotive manufacturers and space engineers look to Bill when they need top-drawer designs.

It makes sense. He's proven his mettle on more than one test track, sweated out his share of countdowns.

When Simmons wanted a new furni-

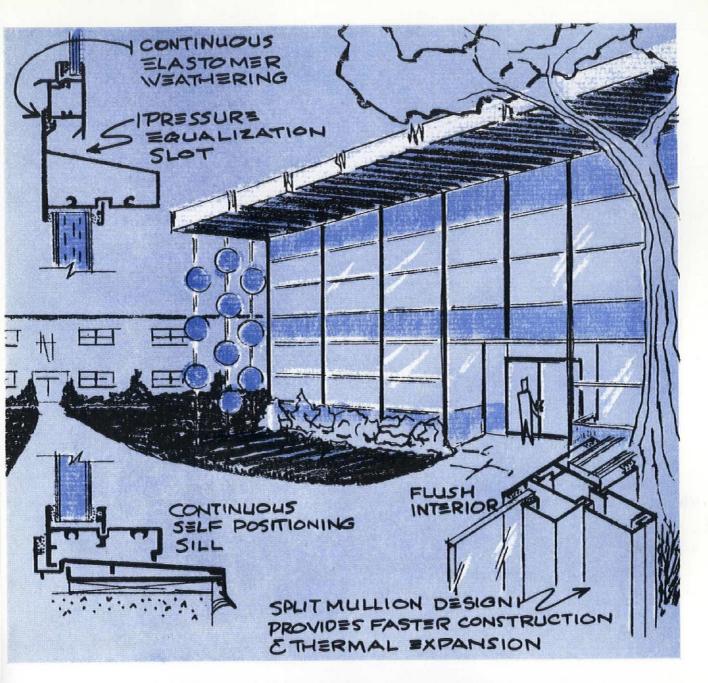
ture design—one that really had functional as well as esthetic benefits—they went to Bill Schmidt, too. He had some revolutionary ideas and helped turn them into practical furniture for you.

Simmons new line combines a unique modular concept with styles suitable for any interior design.

Don't buy another stick of dormitory furniture until you see Simmons new PACE line. There's a surprise for you in the drawer!



For more technical data, circle 227 on information card



#### the Sealair 170 window that inspired a Kawneer curtain wall system!

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installation fast and economical. ■ Standard finish in Alumilite 204R1 at no extra cost. Or you can add warmth to your designs by specifying from a choice of optional Kawneer *Permanodic* hard color finishes. They resist abrasion, corrosion, fading and ravages of weather and industrial climate. ■ Write for File No. WS-65. Address Kawneer Products Information, 1105 N. Front St., Niles, Michigan.



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#### Institute Supports Preservation Bill

The Institute has given its backing to legislation dealing with historic preservation.

Institute President Morris Ketchum Jr. FAIA in a letter to the House Subcommittee on Housing said the AIA supports H.R. 13790 "in every aspect."

First Vice President Charles M. Nes Jr. FAIA, in a statement before the Senate Subcommittee on Housing on S. 3097, gave the same endorsement. And both Institute officers said they found "particularly noteworthy" provisions in the bills that would:

Restore buildings of architectural as well as historical value; sell or dispose of such structures for restoration to private as well as public groups; relocate such buildings without as well as within urban renewal areas; authorize grant-in-aid credit for purchase and renovation of historic structures; authorize grants to the National Trust for Historic Preservation to restore structures of historic or architectural value; make grants to cities to survey such existing structures; provide loans to tenants as well as owners of historic or architecturally significant structures to assist in their restoration; preserve historic structures under the urban beautification program; and provide fellowships for architects and technicians in the historic preservation field upon the recommendation of a Fellowship Advisory Board established for this purpose.

Ketchum and Nes offered the AIA's assistance in making the fellowship program a success. "The AIA, in association with its sister organization, the Association of Collegiate Schools of Architecture, presently awards and administers some 70 scholarships to worthy students of architecture," they related.

"Further, the Institute is prepared to recommend to the [HUD] Secretary qualified and talented individuals who would serve with distinction on the Historic Preservation Fellowship Advisory Board."

Ketchum and Nes made these two suggestions on a section providing for a National Advisory Council on Historic Preservation:

"First, we note that with the exception of federal and private members, all council members are appointed by the President from a panel suggested by organizations of recognized standing in their field. To assure that at least two of the four private council members are experts in the field of historic preservation, we suggest that they be appointed by the President from a panel of at least four individuals submitted jointly by the National Trust for Historic Preservation and the AIA.

"Second, we suggest that the council's executive director be appointed by the council from among qualified applicants. Further, the executive director should be responsible only to the council."

Elsewhere in preservation:

▶ In cooperation with the National Trust, HUD is financing the services of an expert advisory panel to review often controversial proposals to save structures and neighborhoods in urban renewal areas. This is among several HUD efforts to save landmarks.

► Earl H. Reed FAIA has received the Gold Medal of the Chicago Chapter AIA for his efforts on behalf of historic preservation and the Historic American Buildings Survey.

Continued on page 44



For more technical data, circle 229 on information card 40

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Story of a
Revolution

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The revolution is the third dimension in acoustical metal ceilings, Textured Metal Pan, a new ceiling concept from the Steel Ceilings Division of The E. F. Hauserman Company. 

Textured Metal Pan lends a soft sculptured appearance to the proven durability of metal pan ceilings. Joints and perforations virtually disappear and the resulting visual effect is vibrant, continuous and monolithic. 

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Newslines from page 40

#### Institute Assists Appeal Of Licensing Decision

The Institute is helping the New Jersey Society of Architects in appealing a court decision that invalidated the automatic licensing of architects, engineers and land surveyors as professional planners.

New Jersey is the only state to have a professional planning licensing law, and the case is believed to have national implications for architects.

The State Legislature adopted the law as the result of collaborative action by New Jersey components of AIA, AIP and NSPE. Following adoption, however, the planners contested in court two sections of the law.

One section permits architects, engineers and surveyors to perform all of the services of the professional planner provided they do not call themselves planners. Superior Court Judge Frank J. Kingfield found nothing unconstitutional in this.

But the other section in conten-

tion, providing for the automatic licensing of the three professions as planners, was found by Kingfield to be in violation of the state constitution.

To add to the seeming paradox, other sections in the law specifically prohibit the offering of planning services without being licensed.

New Jersey architects and engineers are taking the case through the appeal process. Because of the precedential aspects, the AIA Board of Directors granted funds to assist with the litigation.

#### Spreiregen Joins National Endowment for the Arts

Paul Spreiregen AIA, director of urban design programs for the Institute over the past four years, leaves this month to join the National Foundation on the Arts and the Humanities.

The foundation, established by Congress and signed into law by the President last year, is the umbrella for two endowments: the National Endowment for the Arts and the National Endowment for the Humanities.

Spreiregen will be with the Endowment on the Arts, for which policy is made by a 26-member council concerned with both performing and visual arts. His staff position is that of program director for architecture, planning and design as applied to the environment.

Both endowments are empowered to make grants-in-aid as recommended by their councils. Among Spreiregen's major initial responsibilities will be his service as program director for research into the possible creation of a national institute of environmental design.

Spreiregen, 34, is author of the book, Urban Design: The Architecture of Towns and Cities.

#### Open Spaces Win 2 to 1 In Bard Awards Program

The comment of the jury was significant:

"We felt at the outset that excellence in architecture and urban design is, in fact, one requirement when building in the city today. The projects which are being honored recognize that any building or open space proposal . . . has the responsibility to create continuity at

Continued on page 48



#### LOOK AT THE RECORD: 238 buildings and two homes — in 3-1/2 years.

Apartment Buildings, 3; Armories, 2; Art Centers, 1; Aviation & Space Buildings, 1; Bakery Plants, 1; Bank Buildings, 7; Churches, 13; Convention Halls, 3; County Health Buildings, 1; Court Houses, 1; Department Stores, 10; Dining Halls, 1; Dormitories, 26; Factories, 5; Federal Buildings, 1; Field Houses, 1; Fire Stations, 1; Funeral Homes, 1; Hospitals, 12; Libraries, 6; Municipal Buildings & Jails, 3; Museums, 2; Newspapers, 30; Office Buildings, 13; Parking Garages, 32; Police Stations, 1; Research Centers, 12; Restaurants, 1; Schools, 22; Shopping Plazas, 4; Student Unions, 6; Technical Training Centers, 2; Telephone Buildings, 10; Town Halls, 2; University Administration Buildings, 2; Vocational Schools, 1; Misc., 25; AND TWO PRIVATE HOMES! TOTAL: 240. — And the type, kind and size of building grows almost daily.

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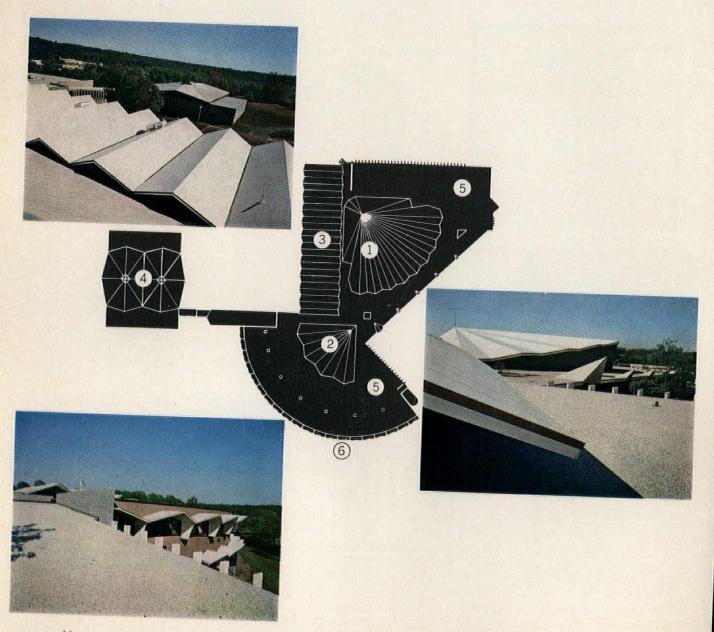
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# Roof design declared in



### independence Connecticut

# Johns-Manville roofing materials meet unique needs of Coleytown Junior High School-Joseph Salerno, Architect.

The Coleytown school in Westport, Connecticut, illustrates the new freedom in roof design—with the new generation of built-up roofing materials from Johns-Manville. Here's how advanced J-M roofing products were used with imagination in this functional modern design:

J-M Last-O-Roof® was the choice for the fan-shaped folded plates over the auditorium (1) and the library (2); for the roofs of the arts and crafts rooms (3); and the octagon roofs (4) of the detached gymnasium. Last-O-Roof is a single-membrane plastic elastomer roof. It adapts to practically any roof configuration and can be used on practically any slope. Application is fast because the membrane and cements arrive ready to use, require no on-site preparation. The roof is finished with a reflective coating of Last-O-Lume®-white here, but also available in colors.

J-M Gravel-Surface Roofing was used on the flat roof area (5). It's built up with Johns-Manville base and finishing felts, plus a flood coating of the J-M bitumen, Aquadam®, and a white gravel topping. Here the gravel surface contrasts attractively with the



gleaming Last-O-Roof surfaces that rise from the flat areas.

J-M No. 80 Flexstone® Roofing covers the "eyebrow" sunshades (6) over classroom windows. The top ply in this asbestos roof specification is No. 80 Flexstone cap sheet. Its felts are 85% asbestos fiber, so they are actually flexible coverings of stone. These asbestos felts are asphalt-saturated, then asphalt-covered, then firmly embedded with a layer of ceramic granules. No. 80 Flexstone can be furnished in white or in a variety of colors.

J-M Last-O-Flash® was specified for all of the flashings. This is a heavy polyisobutylene film embedded with woven glass fiber for extra toughness. Developed as a component for Last-O-Roof, it can also be used with other

roof specifications at parapets, eaves, vents, skylights, even as a throughwall flashing . . . in fact wherever flexible, durable flashing or waterproofing material is required.

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Circle 232 on information card

Newslines from page 44

a minimum but, beyond that, must strive to enrich visually the urban setting of which it is a part."

Thus the jurors for New York's Bard Awards program gave two of its three First Honor Awards for Excellence in Architecture and Urban Design to open spaces rather than buildings. In either case, Philip Johnson FAIA fared well. The winners:

The Henry L. Moses Institute of the Montefiore Hospital and Medical Center, Johnson, architect.

The Sculpture Garden at the Museum of Modern Art, Johnson, architect, Zion & Breen, landscape architects.

Lincoln Center Plaza North, a collaborative design effort of Harrison & Abramovitz, Philip Johnson Associates, Eero Saarinen & Associates, Skidmore, Owings & Merrill, and Pietro Belluschi FAIA and Catalano & Westermann; Dan Kiley, landscape consultant.

The Bard Awards program was created in 1961 by New York's City Club to encourage excellence in architecture and urban design in New York. Its name honors the late Albert S. Bard, a former trustee of the City Club who for 60 years fought for a better and more beautiful city.

This year, the program was open to privately commissioned projects completed within New York since Jan. 1, 1964. The jury was made up of Ulrich Franzen AIA, John M. Johansen AIA, Albert Mayer FAIA and Paul Rudolph AIA.

Next year the program will return its focus to publicly sponsored projects.

#### Situs Picket Measure Stayed by Maneuver

The common situs picketing bill is hung up in Congress for the moment, at least, but not because of the tides of opposition it has generated within the construction industry.

What is staying the measure are the tactical maneuverings of a lone congressman, Adam Clayton Powell (D-N.Y.).

Powell, chairman of the House Education and Labor Committee, had assured House Speaker John W. McCormack he would call up the bill in early May, according to an angry McCormack.

But when the time came, Powell Continued on page 50

For more information, write or call any of the Institute members listed below:

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Look for Mo-Sai Institute Inc. booth E-4 during the 15th annual AIA exhibit at the Denver-Hilton.

Circle 231 on information card



# "The sculptured look"... Mo-Sai preglazed windowalls and vertical fins

Topping all other buildings in dynamic San Diego's fresh complex of government, business, and cultural structures is the new First National Bank Building . . . stunning white landmark tower for the "city in motion."

The 25-story structure has been characterized by the firm of Tucker, Sadler, and Bennett as: "A sculptural piece of art, with all its bays and curves and panels . . . It is contemporary with a classical approach — a rectangular cube on the skyline, soaring and vertical. Light and shadow throughout the day create a changing pattern of textures."

The major fins are crystal white sculptured Mo-Sai, as are the windowall units. Glass was set directly into the Mo-Sai with neoprene gaskets by the Mo-Sai manufacturer before erection and guaranteed for five years against leakage.

First National Bank Building, San Diego, California Tucker, Sadler, and Bennett, A.I.A., Architects and Engineers



Mº-Sai.

PRECAST, PRESTRESSED CONCRETE
WITH EXPOSED AGGREGATE

Newslines from page 48

said he was opposed to the bill because the Senate failed to take it up and because the Upper House would probably not pass it anyway.

Observers of the Powell methodology inferred that the congressman was hoping to get labor, which has been pressing hard for the bill's passage, to transfer its attention to a fair employment practices bill passed by the House but figured to have a tough time in the Senate.

Meantime, while all this was going on at the Capitol, a national Ban the Boycott Conference was held in Washington with Institute Executive Director William H. Scheick FAIA as one of the speakers.

Probably the most immediate impact of the bill's passage," he said, "would be an increase in labor costs." He noted that take-home pay for building trades workers averaged \$4.82 per hour on April 1 and \$5.50 for Washington bricklayers.

"We do not begrudge these earnings," Scheick explained. "We simply note that these wages have been achieved without special interest legislation."

He said despite assurances from proponents of the bill (H.R. 10027) that product boycotts would not be sanctioned, the AIA believes this would be "an indirect effect of the legislation."

Added Scheick: "If the bill be-Continued on page 129

NECROLOGY

ARRASMITH, WILLIAM S. Louisville, Kv. BASCHNAGEL, ALFRED G. Buffalo, N.Y.

BRANDT, JOHN F.

Elizabeth, N.J.

CLINCH, HOWARD T.

Reading, Mass. COOKE, LEE R. Nampa, Idaho DES ROSIERS, ARTHUR Detroit, Mich. DURANG, F. FERDINAND, SR. Summit, N. J. IGLESIAS, SANTIAGO, JR. Hato Rey, Puerto Rico JONES, JOSEPH HOLTON Wilmington, Del.

MC CARTHY, JOSEPH W.

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SIMONS, SHIRLEY

Tyler, Tex. STICKNEY, ARTHUR J.

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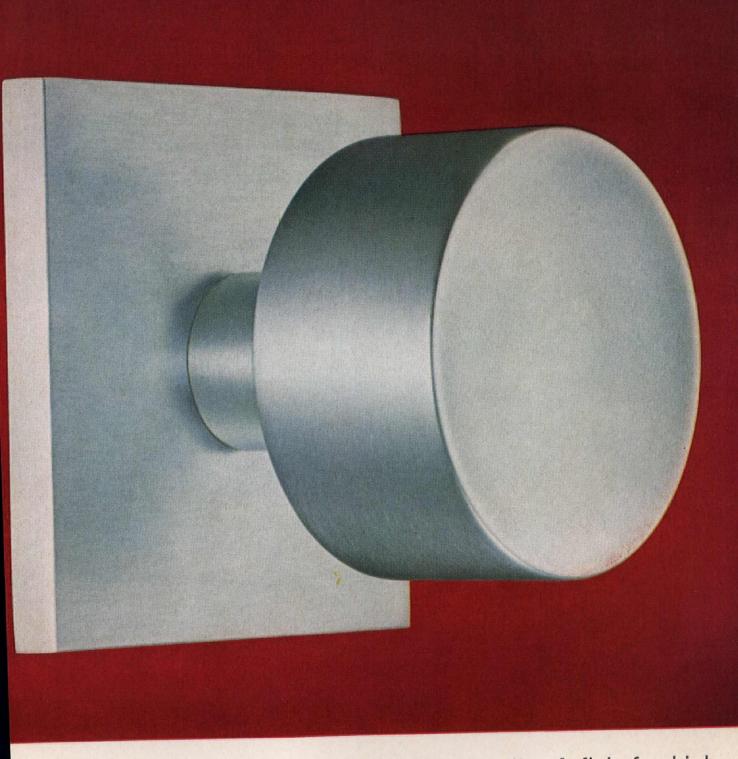
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A handful. The shape of styling, heft, security. A flair for high fashion. SARGENT. Many more shapes, many more locksets. Part of a complete line of advanced architectural hardware featuring the Sargent Maximum Security System. SARGENT.

#### We're Ready in Denver—Are You?



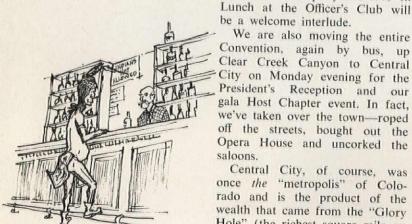
MY OLD FRIEND, Joe Watterson, one time observed that "regardless of the quality of the program at a national convention, it is the host city

and its impact on the conventiongoer that gives it its name, and by which we remember it."

With this observation in mind, we who are deeply involved with the Denver convention, are orienting ourselves to insure that the Denver we know and love is the Denver that will "read through"

Denver is not contained physically, socially, economically or by cultural tradition-as much perhaps, as are Boston, San Francisco or Philadelphia. The Mile High City sprawls physically all along the Front Range of the Rocky Mountains, from Boulder to Colorado Springs (although both terminals would fight fiercely for their own identity).

Socially, Molly Brown's song about the "beautiful people of Denver" just ain't so. We're hospitable, charming and gracious,



and we will whip any s.o.b. who says we ain't. If we like you, we'll "belly up to the bar" with you; if we don't, buy your own damn drinks!

Economically, Denver is involved with the ranching and agriculture of the plains, the mining and tourism of the mountains and the space and rocketry hardware industries sprawling along the eastern slope. Its trade area reaches from Wyoming to New Mexico and from Utah Kansas.

Culturally, we hauled in our first concert grand piano and our first mahogany bar by ox-cart in 1860. We do too have a symphony-and a top-flight one!

And so, to understand and savor Denver, we must move you around, involve you with the total Denver.

You may be startled by our sense of dimension. For example: We are moving the entire convention on Wednesday, by bus, south along the Front Range-to let you experience the vastness of the plains and the kaleidoscopic marvel of the mountains-clear to the Air Force Academy and the Garden of the Gods near Colorado Springs. We know you will want to tour the Academy-hear organ music in the Chapel and the Purves Lecture in Arnold Auditorium-with the cadets as our guests. It will be a long, hard day, but we hope you'll love it.

be a welcome interlude. We are also moving the entire Convention, again by bus, up Clear Creek Canyon to Central City on Monday evening for the President's Reception and our gala Host Chapter event. In fact, we've taken over the town-roped off the streets, bought out the Opera House and uncorked the saloons.

Central City, of course, was once the "metropolis" of Colorado and is the product of the wealth that came from the "Glory Hole" (the richest square mile on earth) in the "Little Kingdom of Gilpin." This is where the legend of Baby Doe starts. Here is the "Eureka Mine." Here is the first "Opery House," where the greats of the opera and the theater trod the boards and bypassed the village of Denver on Cherry Creek as being too provincial for their talents. Here is "Boot Hill" cemetery. Here is much of our lusty legend and cultural tradition.

If you are to savor Central City and the Old Denver traditions, may I suggest that Gene Fowler's Timberline and Young Man from Denver are "must" background reading, just as Lord Timothy Dexter's A Pickle for the Knowing Ones is a must to savor New England. Gene Fowler was a product of the old Denver Post, so was Eugene Field, and the "Gingham Dog and the Calico Cat" are old Denver citizens.

We think you will love the Opera House with its sloping stage, its miniature orchestra pit tucked under the stage, its minute

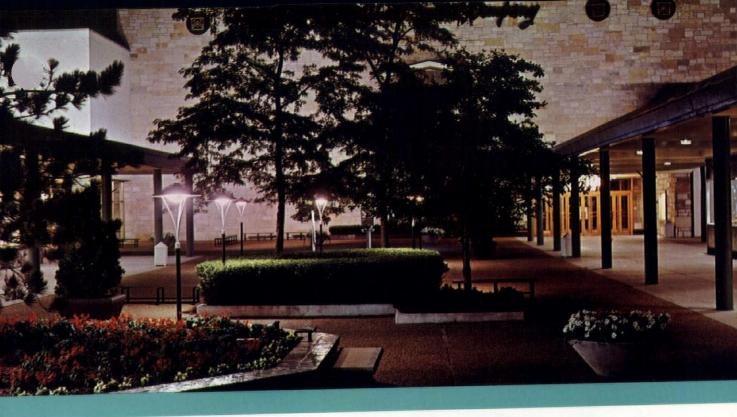


scale and its kitchen-chair seats. Most of all, you will love the opera itself, for our gala Monday night event it will be a command performance of "Carmen."

The summer opera and theater season is one of our cultural traditions, with stars from the Met and Broadway and top-flight supporting casts performing. Somehow, the "Central City fever" gets to them, and they play cowboy by day in the traditional boots and Levi's and sing their hearts out by night-both on the stage and in the local saloons. They've agreed to sing for us at the various bistros as soloists and quartets, standing right beside the "face on the barroom floor."

President Ketchum's reception will be held in the Teller House garden (the famous old hotel) and while we do not promise to pave

Continued on page 152



Line Material CONTEMPORARY LAWN-GLO's, Style A, installed in the mall at Mayfair Shopping Center, Milwaukee, Wisc.

#### FOR A RHAPSODY IN STYLING AND COLOR

#### LINE MATERIAL SOFT ILLUMINATION OUTDOOR LIGHTING

TO 175 WATTS MERCURY • 189 WATTS INCANDESCENT 8000 LUMENS • 0.8 MAINTAINED FOOTCANDLE

#### STYLED FOR THE MOOD

Choose just the right tone to set the mood with the styling of Line Material outdoor lighting. An array of contemporary and traditional fixtures allows you to underscore your job in the key you choose. All L-M fixtures have been styled by the noted industrial designer, Jean Reinecke. Styling ranges from a crisp, sharp modern design to an authentic reproduction of a whale oil lamp. And when you add a variety of 9 dramatic decorator colors, you have a design freedom available in no other outdoor lighting line.

#### **EFFICIENCY, ECONOMY**

You enjoy engineered, optimum useable lighting when

you choose Line Material luminaires. Aluminum construction assures long, corrosion-free life. Low-cost maintenance is realized with the accessible interior that is easy to clean or relamp.

#### COMPLETE SYSTEMS

Minimize the efforts in coordinating your lighting job by obtaining all the equipment from Line Material. In addition to luminaires—poles, ballasts, lamps, brackets, wiring and power supplies, including transformers, are available from your L-M Authorized Distributor, backedup by an L-M Lighting Engineer and an L-M Field Engineer. They'll be happy to work with you.







The smart, modern styling complements any contemporary architectural motif. Provides a flair to soft, functional lighting; 9 decorator colors, and 3 styles.

SPECIFICATION

Utilizes incandescent lamps through 150-watts; has plastic, non-glare globe; standard 2-inch or 3-inch OD yard light post mounting; supplied with or without

LINE MATERIAL'S COMPLETE OUTDOOR LIGHTING LINE ALSO INCLUDES HIGH, MEDIUM AND MEDIUM-SOFT ILLUMINATION

TURN PAGE



#### STYLING AND COLOR FOR YOUR JOB FROM L-M's SOFT ILLUMINATION LINE ...

FOR ENTRANCES . WALKS . DRIVEWAYS . LAWNS . GARDENS . PATIOS . CHURCHES . SCHOOLS . MOTELS OFFICES . INDUSTRIAL AND COMMERCIAL BUILDINGS

To 175 watts mercury • 189 watts incandescent • 8000 lumens • 0.8 maintained footcandle

#### STYLEKING

(Scale: 1"=3')

Diversified, graceful styling plus a choice of 9 dynamic colors. Cover interchangeability gives added versatility. Will match any architectural decor. Pole top mounting for installation economy in new and con-

Complete choice with 7 designs and 9 colors, to match every



#### SPECIFICATION

For lamps rated to 175 watts mercury or 189 watts incandescent; constant-wattage, high-reactance or reactor ballasts; IES Types I, I-1 way, II, II-4 way, III, IV and V distributions; 3-inch and 7-inch mounting fitters; photocontrol accommodation for Styles A, B, C, and F units.

#### STYLETTE

(Scale: 1"=3')



Designed to operate incandescent lamps rated up to 189 watts. IES Types I, I-1 way, II, II-4 way, III, IV and V distributions; 3-inch mounting fitter; includes built-in photocontrol.

#### LAWNAIRE (Scale: 1"=2')



Contemporary styling combined with application flexibility. Available in a choice of 9 decorative colors. For mounting on 3" OD pipe.

#### SPECIFICATION

Available for use with 75-, 100- and 175-watt mercury lamps; internally mounted high-reactance ballast; IES Types II, IV and V distributions; built-in photocontrol.

#### STYLED SUBURBANAIRE

(Scale: 1"=2')



Economical, quality lighting plus fresh, modern appearance. Open refractor reduces dirt and moisture accumulation. Mounts on 1 1/4-inch pipe support. Choice of 9 decorator colors.

#### SPECIFICATION

Available for use with 189-watt incandescent, 100- and 175-watt mercury lamps; high-reactance or reactor ballasts; IES Types I, I-1 way, II, II-4 way, III, IV and V distributions; built-in photocontrol receptacle.

#### TRADITIONAL LAWN-GLO

(Scale: 1"=2')

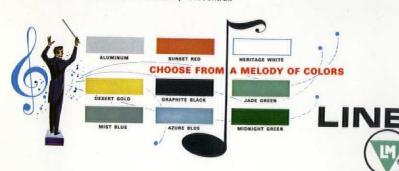


Efficient, controlled illumination combined with charm and styling of Early American whale oil lantern. Long lasting beauty and minimum maintenance achieved with cast aluminum base and cover plus shatterproof, acrylic plastic refractor. Available in black or white with gold finial, roof, and refractor clips.



#### SPECIFICATION

Available for incandescent lamps through 150-watts as well as a 100-watt mercury lamp with high-reactance ballast; mounts on standard 3-inch OD yard light post; supplied with or without photocontrol.



#### **DUSK-TO-DAWNER**

(Scale: 1"=2")

Fresh, modern lines and styling plus excellent lighting. Aluminum finish blends with all types of



architecture. Mounts easily on poles or flat surfaces; also available for mounting on 1 1/4inch pipe supports.

#### SPECIFICATION

Available for use with 100- and 175-watt mercury lamps; inter-nally mounted constant-wattage, high-reactance, reactor or con-stant-current ballasts; IES Types II, III, IV and V distributions; built-in photocontrol receptacle; completely pre-wired, including power supply leads.

FOR COMPLETE INFORMATION on Line Material's line of outdoor lighting contact your L-M Distributor or write Line Material Industries, Milwaukee, Wisc. 53201.

690

#### JE MAI



MCGRAW-EDISON COMPANY



#10 South Riverside Plaza, Chicago, Illinois. Owner and General Contractor: a subsidiary of Tishman Realty & Construction Co., Inc. Architects and Engineers: Chicago office of Skidmore, Owings & Merrill.

### exposed steel: beauty and economy

This building turned out so well the owners are building a second just like it. A 5/16" steel plate and wide flange mullion facade encloses 650,000 square feet of usable area. The wall is free of expansion joints and serves to stiffen the building through composite action

of the steel plate with concrete fire protection and the steel beams and columns. The steel facade is painted graphite black. The owners calculate that even with periodic painting the exposed steel wall offers great economy. The original paint job is expected to last for at

least ten years. The building's classic simplicity presents an honest statement of the function and beauty of steel. For more information about this building or constructional steels, contact a USS Construction Marketing Representative at our nearest sales office.

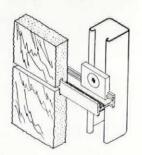


United States Steel: where the big idea is innovation

# REMODEL WITH MARBLE AND SAVE

# with the new Zibell system for anchoring thin veneers

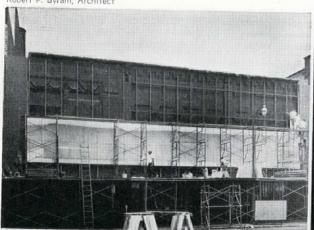
A unique arrangement of metal struts and special fastenings that provide support and anchoring for marble as thin as 7/8", creating a weather-proof wall with or without structural backup. That's the Zibell System — for interiors and exteriors, for remodeling or new construction. It offers



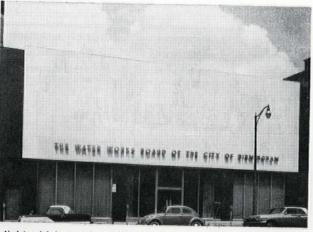
substantial economies in construction and affords the architect new design freedom in working with marble, the finest of all facing materials. May we send you the complete details?

WRITE FOR OUR NEW BROCHURE ON THE ZIBELL ANCHORING SYSTEM

Robert P. Byram, Architect



In remodeling work, the Zibell struts simply bridge over the projections and recesses in the old wall, obviating much costly remedial work. A Zibell installation is comparatively



light which can be critically important in remodeling old structures whose footings and walls might not support the weight of many of the other popular facing materials.

COAST TO COAST CONSULTING SERVICE
Our staff of engineers stands ready to assist you on
any project involving the use of marble or limestone.
A phone call will put one of our men across the
desk from you in a few hours.



11 Pryor Street, S.W., Atlanta, Georgia 30303



#### TECHNOLOGY ENVIRONMENT AND MAN

TECHNOLOGY IS NEITHER the practical application of science nor the means to objects of material culture; it distills, in the end, to people. Environment is neither the spaces in and around buildings nor the quality of those spaces; it, too, in the ultimate. is people.

ultimate, is people.

And so people hold the anchor spot in the theme for the 98th annual convention of The American Institute of Architects—"Technology, Environment and Man." That theme was taken, Institute President Morris Ketchum Jr. FAIA has said, "in order to explore the interrelationship of our scientific and technological achievement, our challenging environment and the needs of mankind."

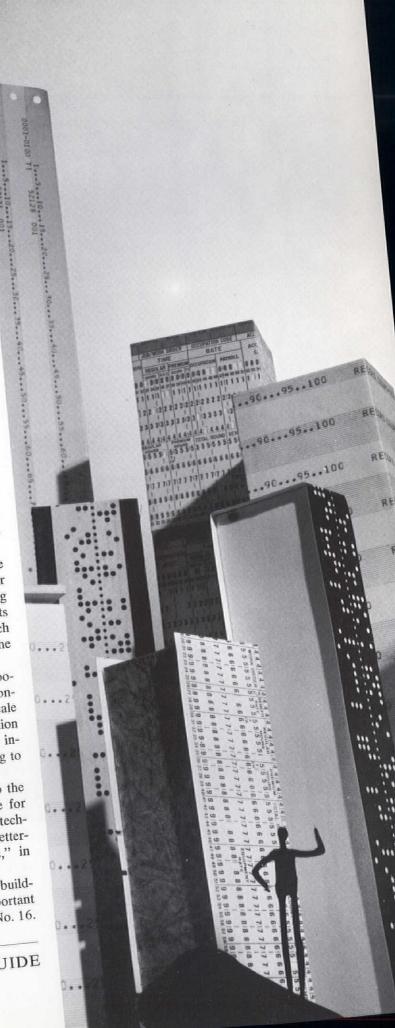
We are starting from a plateau to seek the mountains, and the convention site of Denver could hardly be more fitting. There is something in the spirit and history of Colorado and its capital city, as well as in their geography, which parallels the hopes and aspirations of man as the final third of the 20th century draws near.

The 1966 Official Convention Guide incorporates preliminary contributions toward the convention's three subthemes, discussion of the locale from an architectural viewpoint and information of interest to convention-goers. By deliberate intent, what follows will hopefully be of meaning to those unable to attend the 98th.

The convention is of crucial significance to the entire profession. "The time is long overdue for pooling all of society's specialized talents, technological skills and disciplines toward the betterment of mankind and man's surroundings," in Ketchum's words.

Ketchum's words.

This issue also includes a description of building product exhibits, a traditional and important part of the annual meetings, this year being No. 16.



OFFICIAL CONVENTION GUIDE

#### Laying Little Blocks Aside

### Architecture and Research

BY BEN H. EVANS, AIA

Research, better building materials and systems and more useful materials data require a collective, cooperative, communicative approach.

THE FIRST SURGICAL instruments must have been fashioned from the knives and forks of the day—a doctor decided to cut someone open, selected a kitchen knife and behold, a new profession (surgery) and a new industry (surgical tools) were

They were doubtless born of the same era since it is unlikely the surgeon accepted the cupboard's offerings for very long. Surgical tools were developed, as they had to be.

But isn't the architect still going to Old Mother Hubbard's cupboard to see what little building blocks he might find? Isn't industry still making little blocks for architects?

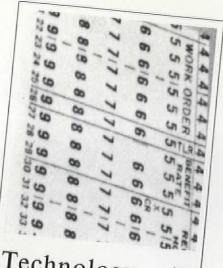
The questions are in criticism of neither the architectural profession nor industry but are aimed at the shortcomings of our overall approach. What can be done about it? Consider first the position of the profession in research.

There is hardly a problem in practice that could not benefit from more extended, in-depth study than the average architect's office can afford. We talk research but seldom do we have the time or resources that permit it. But time and circumstances are ripening for collective research.

The architectural profession and related design fields have recognized that some changes are needed and that if they are to arrive in time they must be made on a cooperative, industrywide basis

It was a half decade ago that The American Institute of Architects installed its supplemental dues program to provide funds for undertakings never before possible. The program with its special projects including research is now considered a resounding success. Many of the projects to get first attention—call it applied research if you will—have been those that assemble and systematize available knowledge and attempt to supply it in such a way as to improve the architect's capabilities.

The AIA has in progress a series of projects directed toward improving practice efficiency, documentation of research information and establishment of the needs of an educational program for tomorrow's architect. Underway are supplemental dues projects to develop basic statistical



Technology press its mark upon this earth and its heavens as never before. It grows, technology does, and grows and grows. But above all, it promises, and the fulfillment of its potential concerns architecture, for its potential is one of creative good.

data about what is going on in the profession new techniques used to handle specifications, drawings, client relations and so on.

The AIA Research Committee also recognizes the great need for research to solve many fundamental problems. Such basic research, best done at universities and research institutions, is of primary value to society as a whole because it deals with fundamental problems related to people and their environmental needs.

The big question seems to be how to increase the pace of needed research. While it is true that much of basic research will deal with subjects closely related to disciplines such as psychology, physiology, sociology, physics, engineering, etc., we believe the best way to stimulate investigation in these areas is to get architects involved in the research — since their particular capability is in bringing together science, technology and human needs to create an environmental form.

Few architects are interested in doing research, qualified to do significant research or are now engaged in research. The program of the AIA Research Committee is to encourage and promote the development and training of research architects who are much in demand at the moment.

What is generally called product research is, the committee believes, fundamentally the concern of industry. And not only is industry doing an excellent job but it is paying its own bills in the spirit of the American private enterprise system.

This is not to say the effort cannot be improved or that the AIA does not have a role in industrial research. Among goals of the committee—and in this lies the role of the AIA in recommending industrial research—is that of communicating to industry's research establishment the problems originating in the profession which represent its demands upon industry.

The traditional building block process in design has produced some beautiful and well-organized buildings. Yet it has also made for a great many more very bad buildings. Herbert Swinburne FAIA, past chairman of the AIA Research Committee, once said of some architects: "They are running around brilliantly solving the wrong problems."

Now, however, we are beginning to see the establishment of a different concept in design, a concept calling in turn for a different emphasis from industry. It holds that the architect should design a building in terms of the *performance* of the spaces, products and systems rather than by specification of product. In a word, we are now telling the producers what kind of surgical tools we need.

Spaces are determined on the basis of the size, shape, color and texture needed to fit function.

Lighting is specified according to required brightness, footcandle levels and distribution rather than by fixture. The thermal environment is specified as to the air temperature, humidity, air speed and thermal radiation, not by machinery.

It then becomes the task of industry to furnish the materials and systems that will do the job. This is not wholly different from what we have been doing, but in most respects it represents an entirely new concept.

A prime example of the process is the California School Construction Systems Development Project (supported by Educational Facilities Laboratories) in which a group of architects and their engineers carefully studied the performance needs typical of schools in southern California. A set of written performance specifications was developed and submitted to industry for bidding.

The proposal called for development of whole new systems and products to meet functional needs. It called for considerable coordination between various parts of industry so that the individual products and systems would fit together to form one big system. It rejected any submissions that failed to meet esthetic and functional needs.

With a reasonable potential profit in view, industry decided to supply the new systems in spite of vast expenditures for research and development, reorganization and retooling. Industry hired architects and put its production engineers, sales forces and designers to work. The results have been very encouraging. It is too early to know whether industry and the school systems will reap significant rewards but visions of a better day for architecture are heightened.

Industry has demonstrated again and again its willingness to take reasonable risks. It is a significant duty of the architectural profession to help point the way to new possibilities — by stating performance requirements, by judging and establishing design acceptability and by communicating problems to industry's research establishment.

The profession must demand good product data, and industry must do the research and provide it. In the long run, everyone will benefit. Our buildings will work better and last longer, industry will gain the confidence of architects, fly-by-night producers will perish and an immediate improvement in products will of necessity occur along with a willingness on the part of designer and building owners to accept probable added costs for better products.

Again, it is the function of the profession to tell industry what architects need, to define the esthetic acceptability of products and to demand more and better research data.

Adapted from a speech given at the Conference on Cellular Plastics in Construction of the Society of the Plastics Industry, Inc. The author is director of the Institute's research programs.

#### Outer Skins and Contact Environments

#### BY CARL FEISS, FAIA

Traditionally, man's second skin has been stabile, but what with technology, fouled nests and economics it could become mobile and autonomous, allowing a wide choice of opportunities.

THERE ARE FEW PLACES in today's world where man does not require a second skin of clothing and even a third or outer skin which he also sheds, not by taking it off but by walking out of it. This outer skin in our technological age may be mobile or self-propelled, fixed or rigid. Its dimensions provide a plenum chamber environment called a "room."

The third skin is generally fixed in location except for mobile homes and mobile rooms—automobiles, Pullman cars, airplanes, boats and space capsules. Fixed or mobile, the space the outer skin envelops creates an artificial environment, and the nature of this environment is determined by man's capacity to design it, his will to do so, and his interest in its character. Designing the right character of the plenum chambers within the outer skin, fixed or mobile, is a problem that has been with us since man moved into the cave.

Man has many kinds of outer skins which he occupies singly, with his family, or in groups for all kinds of purposes. He eats, sleeps, raises a family, studies, works and plays inside these outer skins we call buildings. The environment inside buildings and the "contact environment" outside, through which man travels in a hurry from one building to another, is largely of his own creation.

Society has made certain apparently arbitrary determinations about the design of the outer skin and what happens inside it. It was decided a long time ago that a number of man's functions are best performed indoors. The Romans successfully found a method of conveying wastes outdoors, and after a lapse of a few centuries we adopted the

system that includes the dumping of untreated wastes into rivers and lakes from which we also draw water and recreational pleasures. This is known as "multiple usage" and dates back to the 6th century B.C. when Lars Porsena of Clusium or one of his friends built Rome's Cloaca Maxima.

In Washington we have an almost exact replica of Cloaca technology in Foggy Bottom, dumping into the Potomac at the new site for the Kennedy Cultural Center some of our capital's rankest sewage. It will be interesting to see whether, by the year 2000, society will begin to correct this.

In the 1930s and '40s there was in New York a great American by the name of Dr. C. E. A. Winslow who headed up an organization called the American Public Health Association. He also formed the Committee on the Hygiene of Housing headed by such dedicated men as Alan Twichell and Alan Pond. This committee, later with headquarters in New Haven, looked at the spaces inside and just outside the outer skin to see how man could best make his own environment. Its report, "Basic Standards for Healthful Housing," is now as hard to find as a Button Gwinnett signature, and it appears Dr. Winslow and his fine team are long forgotten. This is tragic for many reasons; hopefully before the year 2000 the team will be re-established.

About the same time as the APHA studies, Buckminster Fuller undertook at MIT preliminary research for his "autonomous house." A wonderful idea! Fuller recognized that modern cities and all their building components depend on a sewerage system little different from the Roman.

The septic tank is only partly successful and in many places unfeasible. The sewage disposal plant at the far end of miles of pipe is part of an expensive, inefficient and outmoded system for which there appears to be no sound alternative. House trash and waste mount up. Incinerators are

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expensive and only partly efficient. Land for landfill is getting scarce and farther out. Only a few cities are near to ocean deeps. Pig feeding is less popular. And so it goes.

So Fuller tried to invent a house that produced its own heat and power, using a heat pump, and by various electric and chemical devices, dissolved, burned, pulverized and otherwise reduced all wastes to a daily cupful of ash. The research was never completed. With today's technology, its electronics, solid fuels and all sorts of new scientific techniques, the autonomous house must be pursued until found. Again, hopefully before the year 2000.

In the 1920s and '30s the British Ministry of Health took over the British housing problem. Immediately after World War I the slogan, "Homes for Heroes," swept England in a campaign to solve a bitter housing shortage. Overcrowding, endemic in British cities, had become virulent. The ministry established and sternly enforced regulations on overcrowding, and it was directly responsible for encouraging the construction of housing by the various British county councils, all in accordance with dwelling space requirements spelled out in detail. In other words, the agency in Britain, precursor to our US Department of Health, Education and Welfare, has been working on shelter standards for 40 years or more.

Bricks and mortar are not solely the responsibility of the Department of Housing and Urban Development. I do not wish to be unfair to Public Health, but there was a time in the early 1950s when the Surgeon General's office, influenced by Dr. Winslow's great work, was running a training school on housing for public health officers. By 1945, the APHA had developed the best system yet devised for the appraisal of substandard housing conditions, inside and out.\* The system (in three parts: Method, Dwelling Condition and Neighborhood Environment), is still in use but few of today's health officers know of its existence. The Urban Renewal Administration accepted an APHA survey in any community as a scientific approach to blight identification. Some shortcuts to the system have been devised as it is somewhat expensive and requires trained enumerators. But if a public health official has any interest at all in the relationship between living conditions and public health, he would do well to dig up the APHA survey system and learn the hard facts of many people's lives.

In housing, it is hard to distinguish between health and safety. The police power under which both public health officers and building inspectors operate calls for the enforcement of all codes, ordinances and regulatory measures on behalf of the "health, safety and welfare" of the general

public. Yet my guess is that few housing or building inspectors or enforcement officers are trained in public health and, conversely, few public health officials spend much time checking out the living conditions of their charges. Where are records of overcrowding kept? Who is the true judge of ventilation, sanitation, light, privacy and the multitude of sickening problems of the American slum?

What happened that caused the Surgeon General's office to drop its housing concern? Our slums and blighted areas and unknown substandard urban, suburban and rural houses, old and new, shelter hundreds of thousands of babies, children, grownups and oldsters. I say unknown because I never have been convinced that the census taker has had enough training to judge a healthful, sanitary, safe dwelling. For that matter, a lot of building inspectors may be no better, and the same is true of public health officials. The sad, brutal fact is that we are not only 40 years behind the British but we are not even able to say with certainty what unhealthful housing is, and where it is. I hope we will be by the year 2000.

All right, is there really any relationship between housing conditions and physical and mental health? Al Smith grew up in a slum and Abe Lincoln in a log cabin. Crime in the suburbs is as bad as in the slums. College kids give each other venereal diseases. Cigarettes, not slums, beget lung cancer. We all have too much to do without taking on something nobody can prove. Besides which, slum people take better care of their cars than they do their houses.

But there is a relationship. It is hard enough to keep the human skin clean, and the second skin needs machines and plenty of hot water and detergent. But the third skin, the outer skin, is the very hardest to take care of, inside and out. And when the voids are no longer full of air and light but full of people and furniture, when they smell all day and all night and nothing is safe including the floors, the walls and the roof, and when there is no room to swing the dead cat, it's unhealthy. This is known as the scientific approach.

The architectural and building professions feed the building inspector with all kinds of standards and rules. The fire inspector works to rules and standards that he and the fire underwriters can prove. You light a match and look at the second hand on your watch and you run. If you can't get out in time, the standard is too low. It is that simple. But the building inspector has been given a series of floor areas and ceiling heights and ratios of window space to floor area (not related to whether the windows open or that the next

<sup>&</sup>lt;sup>1</sup> "An Appraisal Method for Measuring the Quality of Housing: A Yardstick for Health Officers, Housing Officials, and Planners." American Public Health Association, New York, 1945.

building is only 18 inches away), and the number of families per toilet and cooking facility.

Through the years and across the country a body of rules and regulations relating to spaces within housing has been built up and is in pretty strict enforcement (when there are enough trained inspectors). This mound of housing codes and building regulations has been studied by all too few trained health scientists and engineers.

What good is air and water pollution control if clean air and water never penetrate the outer skin? What good is a modern sewage treatment plant if houses do not connect to the street sewer? Sometimes when wandering in the slums I wonder if Fuller's truly autonomous house was in fact built a long time ago—except that the wastes fill more than a cup.

In this age of specialists we must respect vision such as that of the architect, Sir Raymond Unwin, who worked on planning and housing standards for the British Ministry of Health, of Dr. Winslow and Fuller and numerous others who steered their specialty into the complex context of society. They placed their own technology in perspective and shared the objectives of their research with experts in other fields charged with the solution of associated problems.

This is never easy or popular, but in the field of environmental well-being from the body skin out to a great metropolitan region it is both a matter of context and of scale. Air pollution begins in the submicro environment between the body skin and the second skin or clothing. Conversely, the largest scale pollution we know of is probably cosmic ray particles. Everything between is without definition and the multiple sciences concerned can find no thin, clear edges of air where one kind of pollution begins and another leaves off.

The land and air space that is in direct contact with the outer surfaces of the outer skin or building, and is associated in some measure with that building and the people in it or moving in, out and around it, is what I call the contact environment. It is also the view from the room, the sources of light entering the room and the land outside which influence the character and condition of the building in a place. The bird singing on a tree branch, heard inside the house, is a part of the contact environment.

Our main problem with the contact environment is that it barely exists as a known space. In building, housing and health codes, it is some multiple of feet between buildings related in some way to the height of buildings. This is not enough.

Solutions to urban renewal problems depend in large part on the identification of housing health problems and contact environmental problems. One point should be made clear, however: En-

vironmental health problems at all times include mental health problems.

The effect of poor housing and environmental conditions has been a matter of growing concern among mental health experts. The riots in Rochester, Harlem, Jersey City, Philadelphia and Los Angeles and the incipient danger of repeats point to slum unrest among the Negro underprivileged with serious environmental deficiencies. The condition of the whole contact environment cannot be disassociated from conditions of substandard housing.

A civil riot, regardless of basic cause, is an epidemic of mental illness—contagious and dangerous—and the causes are complex and difficult to eradicate. If a rat bites my child in a room for which I pay \$15 and which lacks private plumbing, private cooking facilities and adequate heat, I may get mad at somebody or anybody. All the health problems implicit in this condition add up to responsibilities for any society, great or not, to treat the causes.

The causes in the house are easier to identify than those in the contact environment. In the latter the psychological condition of a neighborhood depends not only on cleanliness and order but also on appearance and the availability and adequacy of unknown norms like playgrounds or sunlight and trees. A proud neighborhood is also mentally and perhaps physically a healthy one.

So much for where we have been. Now we ask: What happens in a truly autopian society? The autonomous house will have been invented; the umbilical cords to land, sewers, water and power can be detached and attached at will. There is a real choice in modes of living; there is choice between anchoring or up-anchoring as the winds and currents of opportunity and family fortunes indicate. The freedom of physical movement of a domicile is coupled with freedom of social movement, now restricted by custom and prejudice.

Society will, I am sure, provide the essential landing pads. Private and public enterprise are already doing so in Florida and California for the mobile homes of a rapidly expanding mobile society. I am all for this.

The multiple choices and opportunities this mobility grants to all age and income groups will make possible a fluid society in easy self-communication. People within this alternative will be able to look after themselves, unbound by the contradictions between the forces of the real estate market and the historical requirements of family life from cradle to grave. The community then is challenged to provide those best common denominators of livability architects and planners can devise. This becomes the urban design opportunity of the future.

The goals of our communities should be to provide standards (Unwin's and Winslow's standards included) that will meet the requirements of an expanding society. Housing for our masses is crude and primitive. Show me, architects, planners, housers and builders, one complete, well-designed, well-ordered and desirable place for the middleincome American to live. Where are the prototypes for the Great Society? When President Johnson really gets into his stride he must look toward what the year 2000 and beyond will require. He will find little precedent to recommend. Certainly he will scrap most low-income housing. But the Great Society starts a rung higher on the income ladder; low-cost housing will not be essential as we move from today's pitiful cities to the best common denominator that a society exerting all its resources, talents and technology can envisage.

The shapes and sizes and locations and costs of the houses of the future are unknown, but there is one area where important indicators may be found. Consider the mobile home, not as a final thing but as an interesting break from tradition. It is one of many which we should watch not because it is a final solution but because it suggests new and frequently excellent areas of exploration.

In walking in and out of our outer skins or driving or flying around in them, we habitually adjust ourselves to certain special dimensions and to certain oddities of convenience and health which are not in themselves interchangeable. Society has made some adjustments accordingly.

I would not dream of living in either a stabile or mobile home without inside toilet facilities. But when I eject a mobile living room from my stabile home and cruise in it for several hours, I do so with confidence that roadside service stations will be accommodating.

The mobile living rooms we eject from our stabile homes for cruising purposes usually have better climate control than their launching pads. Ventilation and windows are pushbutton and precision engineered. Heaters and airconditioners are quickly interchangeable. All kinds of things have been designed to make the high-speed living room comfortable and lullingly secure.

The stabile homes familiar to most middle-class Americans do not always resemble in comfort and convenience the homes and wooded lots of exurbia. Our standards, conscious or otherwise, are higher by far than the ability of our pocketbooks in the average American City.

The most convenient and best-designed modern shelter using a substantial amount of technical knowhow is the house trailer. If the right environment cannot be brought to the lower-middle-income group, plus and minus, then a certain sector goes hunting for it. When or if the nest is fouled,

it picks up and finds another. In part, the mobile home is autonomous.

It can break loose from the triple umbilical cords, the sewer, water and power lines, and while it does not yet have a telephone, it does have television. It is calibrated and mechanized, convenient, easy to clean, and can pick its own place and neighbors. It is rarely overcrowded inside although it frequently parks in less than well-ordered places. It satisfies a constantly increasing number of those for whom environmental stability and land ownership and house rental are no longer criteria for a happy life. These residential gadgets bear careful watching because they are becoming a substantial element in the shelter market and are more up-to-date than the latest subdivisions.

Some other 21st century alternatives can be seen from the edge of the dark woods of the single unit hugging the ground, running on top of it or shooting through the air. Underground living is a thoroughly satisfactory habit in many parts of the world and possibly essential to this nuclear age. However, this is a subject about which I am only partly familiar; someone else might better handle it.

Group living in building concentrations of many types, sizes and heights is far more than a mere multiple of single-family units. The influence of the vertical communities of Le Corbusier is being felt; Chicago's Marina City is an example of the beginning of these multipurpose group buildings. Housing, shopping, schools, business and recreation are being combined in brilliantly designed space combinations and floor-use associations. The combinations are infinite and the ingenuity of architects, engineers and planners has hardly been tested. It is safe to say that new forms of urban living are being invented and that each new experiment is supplying new ideas.

Israel is experimenting with high-rise, compact desert towns of a logic thoroughly developed and highly persuasive. The building combinations are anything but traditional and are studiously designed to satisfy as many long-range housing and community needs as can be envisaged.

By the time the 21st century rolls around the form of the city will be markedly different from what it is now. Except for the preservation of antiquities, I hope we have the guts, the technology and the enlightenment to scrap our millions of square miles of obsolescence in urban design and start over with all the speed, power and beauty we can command. Once having created the happy, healthy society our part of the world can and must become, then will we set the pace for the entire planet.

Adapted from a speech for the Department of Environmental Sciences and Engineering, School of Public Health, University of North Carolina. The author is a planning and urban design consultant in Washington, D.C.

# What Irradiated Wood Means to the Architect

#### BY DR. LOWELL T. HARMISON

Nuclear-irradiated structural members, finishing materials—even golf clubs—in which the fundamental substance is that familiar medium, wood.

SPACE AGE NEEDS and improved analytical techniques have given much impetus to the development of a wide spectrum of new materials. Of particular importance has been the extensive use of nuclear energy, but so far much of the work in this area has been limited to basic research, with one exception—the development of irradiated wood plastic materials.

Interest in these materials has grown from diverse research activities in the early 1960s to today's concentrated research and commercialization effort. While the impact of the materials has yet to be felt, the results of several years of development clearly point to a new technology on the horizon.

Irradiated wood plastic material is a composite of natural wood and plastic which retains the natural cell structure and appearance of wood. The wood is impregnated with a chemical compound and subjected to ionizing radiation—irradiation—which produces molecular changes that can be used to extensively modify both hard and soft woods. (There is no residue radiation.)

Potentially, the breadth of this technology may be glimpsed by considering the present utilization of wood and plastics. Each in its own way has met many of the architect's needs. But the combining of the outstanding characteristics of both into a single material offers the architect a new medium for shaping the environment in this scientific era. To sight and to touch, here is wood. Here is the same workable wood, but a wood that works harder.

Irradiation-induced polymerization (changes in the molecular arrangement inside the wood cells) has a number of advantages over common polymerization techniques: uniform polymerization throughout large specimens or nonuniform sections, polymerization at standard temperature and pressure, and more effective use of chemical compounds, to name a few.

Still, irradiated wood must be considered on a limited scale for the moment because of low production levels. In the meantime, however, consider some of its intriguing properties:

Dimensional Stability. Meeting with little success through the ages have been the multifarious attempts to cope with dimensional changes in wood due to variation in moisture content and surrounding environment and the concomitant effects of warping, checking and honeycombing. Now, however, we have made extensive improvements through impregnation and irradiation.

When compared with untreated wood, dimensional changes have been reduced by more than 50 percent. Basically, this results from much lower water absorption characteristics. The materials, therefore, provide a strong barrier to water vapors while keeping their dimensional integrity, thus extending the usefulness of wood in architecture.

Water Absorption. Irradiated wood specimens were submerged in water for extended periods, being removed only for short intervals to determine weight changes. Water absorption was found to be considerably reduced from that of wood—up to 80 percent less in some cases.

Weatherability. Being a fibrous material that swells, warps and shrinks as its moisture content changes, untreated wood is obviously impractical in high moisture environments, particularly when used in thick or large, flat sections. Weatherability tests imposing a variety of climatic conditions indicated the materials are superior to unmodified wood and could prove to be more desirable than standard finishes since the finish can extend the full depth of the material. The limited availability of these materials has not permitted an across-the-board examination of their weatherability characteristics but extensive efforts are underway to confirm initial findings.

Hardness. The hardness of irradiated wood is much greater in both the hard and soft woods, but it is to be noted that low-grade soft pine can be improved beyond that of the best hardwoods—benefiting by a hardness increase of 200 percent or more. The increased hardness makes possible the use of wood in a wide variety of new applications and reduces the effects of scratches and abrasions.

The author is staff engineer of Hittman Associates of Baltimore, Md., a firm working in nucleonics, advanced materials, energy conversion and aerospace and oceanographic sciences.

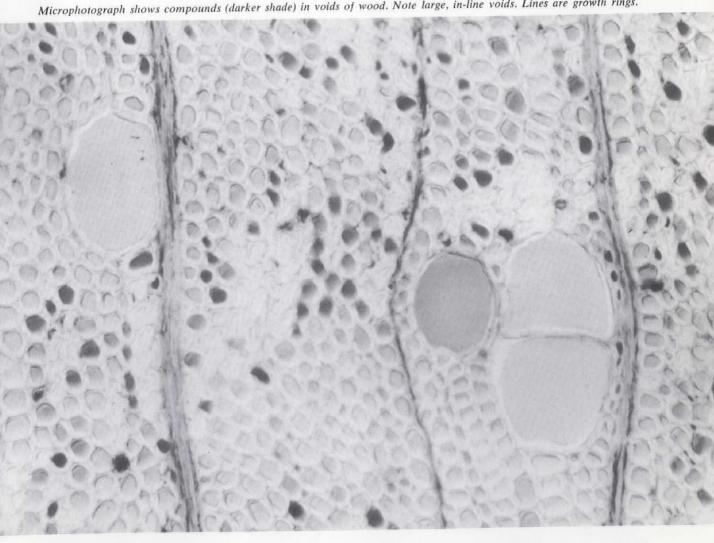
Compressive Strength. Compressive strength is vital to contemporary architecture which seeks strength and avoids mass. That of irradiated wood is more than 100 per cent greater than that of untreated wood. It should be borne in mind, however, that the degree of improvement is dependent on the chemical compound, the wood species and the level of impregnation.

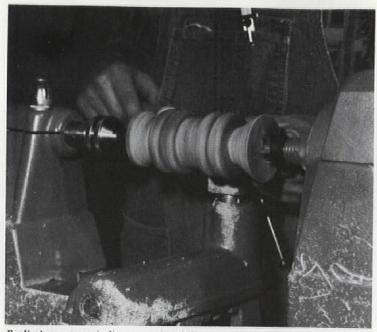
Shear Strength and Static Bending. Both properties have been improved up to 50 percent or more over unmodified wood. Improvements in these properties are also closely related to treatment and chemical compound. The implications of increased shear strength and static bending may be felt in many aspects of architectural applications from ordinary beams to special decorative applications.

Esthetic Qualities. Natural beauty along with workability and flexibility have for centuries provided the architect with a universal material for expression. The esthetic qualities of natural wood are retained by irradiated wood.

That the appearance and texture are kept makes the irradiated materials markedly different from most of the modified woods produced by existing methods. This retention is a primary advantage of irradiated wood. The natural grain and texture of wood combined with the beauty, clarity and wide

Microphotograph shows compounds (darker shade) in voids of wood. Note large, in-line voids. Lines are growth rings.





Preliminary tests indicate machinability equal to untreated wood.

color range of plastics, particularly the acrylics, yields truly elegant materials when properly integrated. The nature of the finish and the ease of preserving or refinishing its surface due to full penetration of the polymer complex also adds to both the durability and utility of irradiated wood.

Machinability and Fabrication. Preliminary data indicates that these characteristics are equivalent to those encountered in working with the basic components individually. But more experience with a greater number of chemical compounds and species is required to verify first observations. From a fabrication standpoint, joining and other fastening techniques such as nailability need more definitive testing to assess the implications of various treatments and polymer additives upon fabrication.

Impact and Abrasion Resistance. Wood and plastics have both been well known for their impact and abrasion resistance. The combination of the two through irradiation produces new materials which in preliminary tests reveal improvements in both properties. Due to the number of variables in treatment, however, it is necessary that more testing be performed to more fully evaluate the impact and abrasive characteristics of irradiated wood. But increased toughness with integral color and the advantages of strength and dimensional stability are evident.

Flame, Decay, Insect and Chemical Resistance. No quantitative data has been obtained with respect to these properties. However, some tests have been run and, in general, improvements were noted in these qualities. The extent of change and the ability to predict the change must

be more extensively evaluated through both analytical and experimental efforts.

In short, most of the properties of irradiated wood exceed those of natural wood. It is not suggested that irradiated wood will replace wood, metals or other materials, or that it may have a cost advantage over other materials. But neither is it difficult to visualize an enormous number of potential applications from the wide range of the physical, mechanical and thermal properties of wood plastic materials. These materials may be light or heavy, depending on treatment; they are strong and durable; they have a good appearance, feel and color; and they are highly adaptable to production and fabrication. Probably their most outstanding characteristic is that they may be tailormade to the requirements of the application.

Perhaps the best way to present the opportunities of irradiated wood for both architecture and engineering applications is to cover some of the potential applications closely aligned with the advantages of these materials.

Industrial and Construction—paneling, doors, beams, flooring, veneer, stairways, handrails, partitions (stationary and nonstationary), window frames, trim (interior and exterior), columns, sculpturing, ceiling, foyers, balconies, roofing, special shelving and other integrated fixtures, storage tanks, pipes. Specialized uses include bridges, stadiums, walkways, fences, signs, tunnels, docks (piles and planks), rackets and fixtures, construction forms, bowling alleys, outdoor patios, component parts (airplane, railroad and automobiles), tiles and others.

Furniture — Indoor and outdoor applications

for both commercial and residential usage in tables, benches, desks, sofas, chairs, beds, appliance cabinets and many other uses.

Obviously, these and many other applications establish a real need for irradiated wood, but within the broad category defined by architectural requirements, many other utilizations exist. The breadth of these applications involves the full range of considerations which may accelerate or retard irradiated wood's development.

For example, unit cost, high or low volume, property improvement and production and fabrication considerations are factors essential to the establishment of the most promising applications. Nevertheless, from an architectural standpoint it is essential that the principal application requirements be thoroughly defined in order that a material may be selected to fulfill the requirements in an outstanding manner. In general, the primary architectural requirements are strength, surface finish, water or vapor barriers, thermal insulation, appearance, permanence of finish, abrasion resistance and dimensional stability. Since these requirements match the properties of irradiated wood, the potential of these new materials for numerous applications appears excellent.

The architect is constantly faced with the problem of translating new materials into architectural forms. The challenge has been admirably met with certain materials—plastics, aluminum, stainless steel, etc.—as revealed by their impact on modern architecture, from simple to complex applications.

But the implications of any material are dependent on its compatibility with both environmental and design functions (long-term reliability, producibility and economics).

The architect does not rely on guesswork. He does not rely on acceptance by others, or on voluminous qualitative sales data. Instead, he bases his selection and techniques of integration on analysis verified through testing.

The rapidly expanding field of new materials and forms offers the architect several possible solutions for each problem. Therefore, it is necessary that problems be faced in an analytic vein. This approach produces minimum repetition of previous forms and techniques and stimulates the generation of new architectural environments which are both useful and imaginative.

It is difficult to assess the architectural usefulness of irradiated wood plastic materials because of the limited utilization at present. The current state of development, nonetheless, offers a broad base upon which the transition to widespread commercialization may be made.

Developmental efforts on the part of several firms appear to be effective in establishing these

materials in the market. Of particular importance has been direct Atomic Energy Commission interest in research and development to generate property data, market surveys and the opportunity for interested firms to have their products subjected to impregnation and irradiation.

Extensive studies have been carried out by various organizations over the past several years on process facility design, materials analysis and commercialization. Work is now proceeding in several areas vital to the growth of the technology.

But the important step for irradiated wood is commercialization. Much has been done in preparation for this vital phase now in its first stages. Total capacity for 1966 is about 500,000 board feet, but the capacity for next year is expected to double this. These quantities are small in comparison with current uses of wood and wood base composites, but as irradiated wood becomes more widely known the production volume will undoubtedly go up.

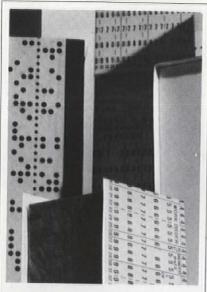
Some commercialization has been established—flooring, tile, stair and landing treads—and other materials are expected to be available soon, but widespread usage depends on the ability of researchers, developers and manufacturers to provide answers to material quality, availability, direct cost and manufacturing cost increase per sales value increase.

What are the costs associated with irradiated wood plastic materials? In general, it may range from \$1 to \$2 per board foot or more, depending on the type of material (wood, chemical compounds, additives, irradiation). But it is interesting to note that over the past two years, the cost of certain materials has decreased by 50 percent (from \$3 to \$1.50 per board foot).

The most probable areas of rapid commercialization are believed to be in construction, specialized applications, veneer products and furniture.

The importance of irradiated woods may not be in their volume but in specific applications where other materials lack their combination of functional and esthetic qualities. The fact that outstanding characteristics of wood and plastic may be combined into a single material affords the architect a new tool by which he may produce architectural environments that are scientifically and psychologically pleasing.

In addition to the existing materials which offer a wide range of properties, new developments affecting architectural products resulting from continual efforts of synthesis, formulation, processing and fabrication will extend usefulness and provide new techniques for influencing architectural environments. Hence, irradiated wood plastic materials offer wide utility, and the architect may look forward to new vistas of materials.



Environment asks that man seek an ecological harmony and repays such effort with his own survival Man also seeks a more profound understanding of himself so that he might design an environment of human relevance as well as human survival.

#### A Naturalist's Plea

#### The Conservation of Man

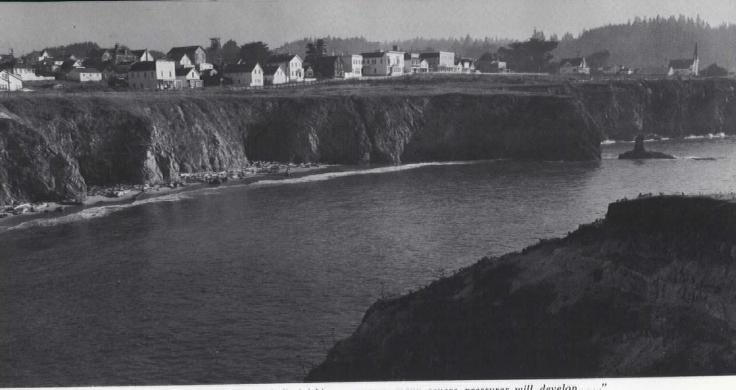
#### BY ANSEL ADAMS

The personal credo of one of America's most respected photographers might well apply to all architects: "I believe in people, in the simple aspects of human life and in the relation of man to nature. I believe that man must be free, both in spirit and society; that he must build strength into himself, affirming the enormous beauty of the world and acquiring the confidence to see and express his vision." He reaffirms that credo here.

WHEN I CONSIDER the problems of conservation and the collective stupidities of mankind in reference to his continuing existence, I keep myself in reasonable check by thinking of Vachel Lindsay's wise admonition: "Pray that you be delivered from the temptation to cynicism and the timidities of orthodoxy."

Today we are confronted by the ravenous monster of waste in every area of existence. In the domain of conservation we can no longer merely woo the euphoria of beauty; we must seek out the basic truths as best we can. And these truths are adult, heroic and bitter. We must face them and act upon them with the utmost vigor and realistic dedication.

Architects and planners must lead in this confrontation. I cannot attempt to grasp or define their approach and methods which represent severe and advanced disciplines. But perhaps I can touch upon some aspects of these fields of op-



"In the face of increasing population and diminishing resources, many severe pressures will develop . . . ."

eration. I wish to state clearly that I am reasonably aware of the vast scope of architecture, of the immediate problems facing its practitioners, and of the most difficult and eternal triangle of client, money and architect.

During the past century we have labored to preserve available scenic beauty and encourage hardy outdoor recreation. The evidence of our effort is revealed in the national parks and forests and in other types of preserves—federal, state and regional—and in a general increase of awareness of natural beauty, which we might call the "natural esthetic."

Of course, there are many uses of the natural domain which do not relate to "preservation" in the ideal sense-hunting, for example. The multiple-use principle expounded by the US Forest Service is, I am convinced, an adjustment to political reality. The Bureau of Reclamation is plugging for the two new dams on the Colorado River (at the borders of the Grand Canyon) on the basis of their power potential and recreational advantages. Travel writers and photographers are promoting the gorgeous beauty of Lake Powell (as seen from a motor boat) but do not mention the crumbling of the soft sandstone. Such promotions can blind the eyes and hearts of millions of our people to the stark reality of loss of some of the most extraordinary areas of the American natural scene.

At this time, within a generation, about 90 percent of truly appropriate land has been set aside and, we hope, reserved for a considerable period. We are now concerned with the difficult and costly acquisition of the relatively few remaining areas of natural beauty and—perhaps a more difficult as-

signment—the protection of the areas already designated as "preserved."

We must remember that Congress could rescind the national park concept and protective structure; it could demolish the Wilderness Act; and it could, under extreme urgency, order the removal of mountains and the flooding of vast inland areas. The National Parks Act is *not* a constitutional amendment; therefore, it could be abolished by popular demand. Those who think we are secure for all time in the established aspects of our protected natural environment, wildlife domains and extensive recreational areas may suffer some painful disillusionments—even within this generation.

Upon what areas of society may we depend for the perpetuation of the secured areas? In the face of increasing population and diminishing resources, many severe pressures will develop, some based on ruthless greed and some on logical solutions of survival. Within the limits of the spectrum of destruction lie many shades of exploitation, misuse and the subtle exfoliation of values and concepts.

We are faced with an ethical problem relating to those who, perhaps with all good intentions, work toward the private development of land under the American enterprise system. They spend money in the acquisition of land and its preliminary development; they employ planning, architectural and engineering advice often at considerable expense. Then, they are suddenly confronted with the strong opposition of those who have belatedly awakened to What Is Going On. Embar-

Adapted from the keynote address presented at the 1965 annual convention of the California Council AIA at Yosemite National Park.



"We begin to see that, for man, the life of mankind is the greatest resource—yet dependent upon all other life an ecological comradeship, so to speak."





rassment, resentment and excessive costs in time and money are always involved in these disputes.

In addition to strictly human manipulations of nature, the specter of nuclear war cannot be overlooked: All of nature, including man, may be irreparably damaged by the holocaust and the poisons of radiation. And, even if Armageddon is indefinitely postponed, we are faced with the creeping death from water and air pollution, the destruction of crops and the pursuit of universal ugliness in the name of progress.

It has been the pleasant habit of conservationists to indulge in the euphoria of our affluence of natural beauty, to speak gently to each other about assured situations, to be sternly righteous about the obvious and, in the main, to be pitifully timid about the sour realities. Since the great days of Theodore Roosevelt, John Muir, Gifford Pinchot, Stephen Mather and William E. Colby, much of our work has been a rather slow erosion of opposition to the insistent destructive forces of enterprise.

However, we have had some notable recent victories such as Echo Park, Point Reyes, Cape Cod, Canyonlands National Park; some partial ones such as the Wilderness Act (seriously reduced in effectiveness over the original plan); and some shocking defeats such as Glen Canyon Dam and the destruction of the redwoods.

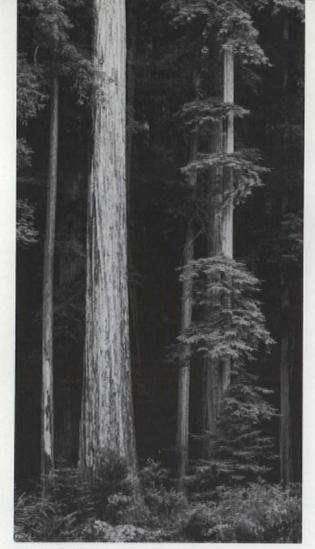
Any man in his right mind must realize the perils of overpopulation, of the pollution of life-giving water and air, of the extravagant overuse of natural resources and of the increasing insults to the spiritual and esthetic environments. Yet, one of the largest corporations in the world, the principals of which are known for great benefactions and leadership in the pageants of conservation, permits a subsidiary company to proceed with a large oil refinery in Monterey County—heretofore a prime agricultural and recreational area of California.

The people in the redwood country howl down the proposed Redwood National Park on the basis of job loss. Yet, at the present rate of cutting, there will be few jobs remaining within a decade, and the land will be devastated for all time. For the cost of a few rockets we could purchase all the land and trees for the proposed park.

Perhaps for the cost of one or two outer-space projects, we could create a plant to distill enough fresh water from the sea to solve—or partially solve, at least—the immediate water problems of our more arid areas. Or we could construct vast nuclear power centers which would produce enough electricity to cancel out the use of fossil fuels with all their polluting residuals.

It is truly infuriating to witness the drag and creep toward these solutions. However, as we are mortal, and not too bright in many ways, we must depend upon occasional great genius, abetted by





"The wise lumberman must project his forests into the future by proper harvesting and reforestation. The resources of ore, oil and food must be respected . . . ."

some (possibly accidental) situations to achieve the essential steps of true progress. In this sense, and in view of the individual's inability to control his environment, we must be compassionate as well as objective. We cannot destroy man to protect nature any more than we can destroy nature to further man. Such destruction would be mutual—and possible!

Our greatest effort must be in the domains of education and enlightenment, not in the obvious meaning of the terms but in meanings peculiar to our time and our peril and in meanings which relate to the additional dimensions of the future. We need sacrifice nothing of basic importance to gain this effective awareness and the benefits which it will bring, but we may lose everything without it.

It is true that more people than ever before enjoy the benefits of conservation, have more recreational interests and are generally more alert to the world of nature around them. But, in the main, their knowledge and dedication are really superficial.

The Sierra Club has done a magnificent job in the production of 11 "exhibit format" books and the numerous other publications; they have received great acclaim and have undoubtedly served their purpose very well. However, as with all aspects of art, the audience is limited; the vociferous approval blinds us to the fact that the great majority of our citizens simply do not know what we are talking about. Our next step is to enter the paperback field and promote or encourage vast television programs. These will reach millions where we can now reach only thousands.

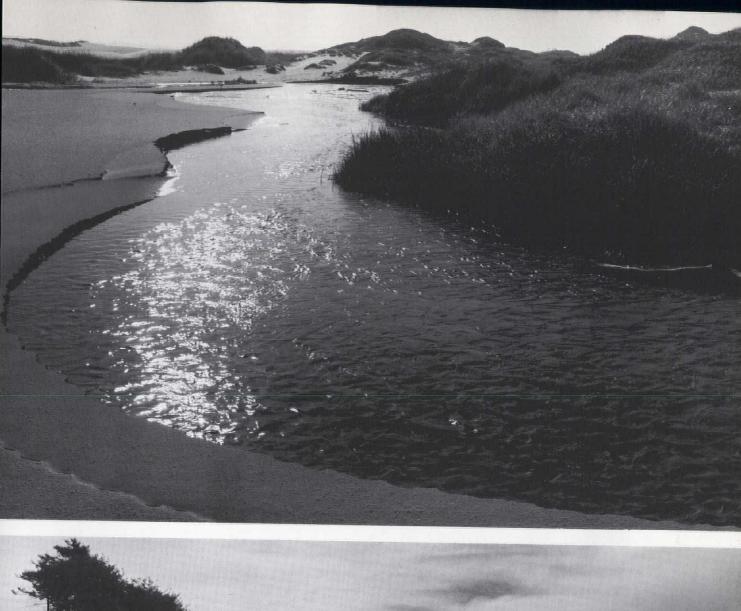
We must have a massive continuing program in conservation and allied fields, including architecture and planning. Time is short; the essential program is immediate. The impulse to follow through must be one of revolutionary or religious passion. The spirit of man has never had such a resounding call to arms.

Architects, planners, artists, writers, educators—all perceptive and creative men—now must join in a sublime objective: the Conservation of Man. We have passed through the stage of self-admiration in which we mirrored ourselves in the shining face of nature. As this mirror now evidences some tarnished areas, we begin to realize all is not perfect; that other and more desolate aspects of the world reflect our condition and our destiny. We must broaden both our awareness and our conscience. We begin to see that, for man, the life of mankind is the greatest resource, yet dependent upon all other life—an ecological comradeship, so to speak. Once this partnership is impaired or dissolved, disaster will come upon us.

The destructions facing us evolve from a chain of causes: no single source may be accused. We can avoid them by appropriate management—management inspired by creative and realistic education. The dignity of the individual produces the inner light of the group, and the directions of the future must evolve from the common desire and consent of the people. A personal dictatorship is far too dangerous to contemplate!

The wise lumberman must project his forests into the future by proper harvesting and reforestation. The resources of ore, oil and food must be respected and controlled. All the forces of civilization must be directed from within: to protect, to plan and to execute. These three come under the total pattern of human management, with the objectives of health, security, beauty, excellence and peace as the continuing goal.

This is the age of interdependence; in industry, science and art no isolated event can have possible meaning. I feel you will agree that architecture is no exception; that no structure can exist without function and consideration for its environment. Most structures about us are insults at random: insults to taste, insults to those who must occupy them, as well as to those who must look upon





them. Land and its use have a particular ethic: legally it is one thing; socially, another; esthetically, still another.

Most planning is centripetal without regard for environment in space and time. I have observed some planning and architecture in certain national parks that affront not only the visitor but the inherent beauty of the locations to a criminal degree. The original concept married an engineer and they lived happily ever after.

Our basic rights in reference to land are vital to our philosophy, yet those rights must adapt to the total human condition. Every piece of land (and what is built upon it) belongs to the owner—and to everyone else in varying ways. You have a right to cut down a tree on your land, but in so doing you have changed the ecology of the area, you have affected the water-flow characteristics of the soil, you have changed the sunshade sequences on other vegetation, and you have made a decisive alteration to the visual aspect of the area. Some of these effects may be very slight and relate mainly to you.

But everything we do in our land relates to the future, and when we think of millions of pieces of land and of the hundreds or thousands of years ahead, we should be terrified at the total prospect of destruction implied. Again, if we think of extended "developments" on this land—homes, factories, freeways—or if we think of lumbering, mining, even farming thereon, we can anticipate a vast total destruction accumulating in the years to come.

Now, as we must use land for resources and working and living space, we must accept some accumulated future destruction. But we can control this destruction by adequate planning through education. To me, all good architecture should be a shrine to the future; what man builds should grace the environment, not defile it. It is obvious that in an environment of outstanding natural beauty, architecture and planning are truly "exposed" and appropriate concepts and executions are reasonably assured.

But what about the ordinary urban, suburban and rural environments? What must be done to create a sense of excellence and excitement of living? It is said that in the first 10 years or less of life, the basic world images are formed: the tendencies, appreciations and the patterns of human relations of the citizens-to-be. What the child experiences defines what the man contributes. Is it conceivable that much greatness can emerge from Harlem? Or from the other dreary slums of countless misplanned cities? Or from the monotonous miles of commercial developments?

Lawrence Halprin once made a sage observation: Make the cities beautiful and provide ample opportunity for healthful recreation. In this way you will do much to save the wilderness, for millions will not have the burning desire to escape from grimness into wild beauty (and thereby consume it). What is more important is that a beautiful environment for living and working is a continuing thing—much more rewarding than a frantic journey to a remote wild area, followed by the inevitable relapse of spirits on return to the drab horrors in which so many of us must live and work.

But there is hope! On a recent trip east I saw some beautiful promises of environmental sympathy and empathy: some concepts of sheer grandeur such as the Dulles Airport near Washington, D.C.; some concepts of urban imagination such as the Prudential Center in Boston. It is not just a matter of hair-splitting architectural values, but I felt in what I saw, a concept of magnificence, a feeling for space and light, in addition to rewarding functional attributes.

Perhaps I have suggested the great unfolding spirit of our time, of which I am aware in art and conservation. It is simply this: I think we are growing up. In this process we have broken our toys, exhausted our cakebox and messed up our playpen. Some of this damage can be repaired, but much of it will stare at us forever and, I hope, remind us of our undisciplined beginnings.

Education seems to me to be more the solving of meaningful and exciting problems of life than the dull implanting of facts and methods. There will be no such thing in the future as an artist, an architect, a photographer or a scientist in the present accepted meanings of the terms. There will be cultured and buoyant men and women experienced in the problems and solutions of living and with specialist training in their chosen fields.

An architect will be (as a few are now) prophet, conservationist, confidant, competent designer and compassionate fellow-being. He will not just put contraptions upon the face of the earth, but he will conceive and build structures of spirit and beauty in which even the most mundane task can become an act of faith and purpose. To accomplish this, he must work with nature, not against it. He must have the same veneration for a tree or a stone as for the greatest works of man; he will build with and around rather than over and upon. He must consider the myriads of eyes that will look upon his work, the moods of beauty and wonder his work should evoke, and the comfort and efficiency of his spaces and vistas.

Conservation, therefore, represents the order and dignity of man and his relationship with the world and with other men. The architect and the planner are essential to the realization of this tremendous ideal. And for all of you, I would like to paraphrase a line from an old spiritual and say: "You have the whole world in your hands."



An Architect's Plea

## Total Design II

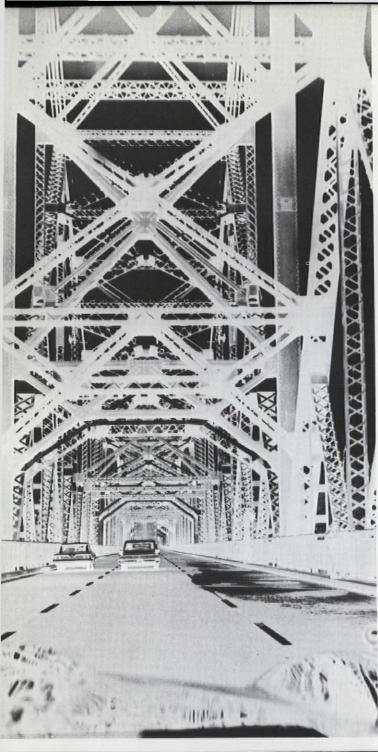
BY PAUL THIRY, FAIA

The Seattle practitioner and member of the National Capital Planning Commission expands on a theme presented at the AIA's New Orleans convention in 1959 and published in the December AIA JOURNAL of that year. His message today is more timely and meaningful than ever.

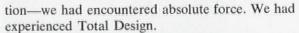
AT ONE TIME OR ANOTHER we have each been to the seashore. We can remember when we dug in the sand and fashioned canals, roadways and fanciful castles, and how we buttressed these structures with walls and connected the complexes with mighty bridges and drawspans. Often by evening, to our delight, we had constructed a great city, ready for the activity of the next day. What a beautiful place it was and how ingenious was our fabrication!

Too, we can remember when, during the night, the surf came in, and in the morning all was gone and the beach was smooth again. Our city was no more. Now there was but sand and the sea's roar. We had mixed feelings of disappointment and satisfaction. Perhaps we started to build again and perhaps we did not; it was not too important.

But there was a lesson to be learned from our debacle in the sand. We had encountered annihila-



"In our period of evolution we ourselves have created tremendous powers of destruction. But we know these powers that destroy can also be used creatively."



Fundamentally, nature persists in a system of competition. This competition is demonstrated to us in the constant change brought about by creation and construction and the equally persistent erosion and destruction. Through the perpetual cycle of change, one place competes for the other as form contests with form and element with element.

In this environment man has evolved. He seeks not only survival but supremacy. To achieve his ends he harnesses and controls the forces of nature. He seeks to subjugate and to dominate all living things.

It is in the seeking of supremacy that a third element is introduced, and that is conquest. Given form, it most assuredly becomes a major force in the cycle of change which may result in beneficial creation or, adversely, in destruction.

It is at this point that man may direct matters to his benefit or, in the end, be destroyed and, with the dinosaurs, be counted vaguely in the annals of the past.

Man has evolved, appeared and disappeared from portions of the earth. Destroyed peoples, civilizations, cultures, places have given way to this competition. Desert sand now occupies land once populated and cultivated. If change can come to some men and to some places, it can come to all men and to all places.

The forces of nature are of extreme magnitude. We know these forces have created results. We know these results have brought the destruction of one form in order to create another. Our evolution and survival have depended upon the degree of our ability to live with nature and with ourselves.





"Man, supreme against nature, against creatures, must soon ask himself if he is supreme against himself."

In our period of evolution we ourselves have created tremendous powers of destruction. But we know these powers that destroy can also be used creatively. Like the powers of nature, they can be harnessed for our benefit. It is through a form of contained creation that we can best understand what we are doing and what the predictable ends might be. Intelligent use of nature, of animal life and of ourselves is mandatory if we are to survive as creatures, let alone as man.

Creative forces and destructive forces do not involve only winds, erosion and fire. They also involve us and what we do when we assume the roles of the elements. We do this when we create and exterminate—in short, when we assume the role of master, a role we would impose on the earth in its entirety. For the first time in the history of the earth we seem to be seeking to occupy, control and dominate completely. For the first time we choose to conquer the earth absolutely, leaving no natural or wild thing unmolested.

We transcend the orbit of the earth and we probe the mysteries beyond. And yet, in our reckless nature, we multiply our species without considering the consequences. We increase our numbers at a rate unknown before, and in our greedy occupancy of all places we do not exhibit sufficient interest in what will be the end result of our own intrusion.

Before our time this kind of situation did not present itself. There was always plenty of everything and some left over. If the land flooded or dried up and blew away, there was always some place else to go. Most of the earth was a great wilderness—a continual challenge to romantic or adventurous speculation.

Short of interplanetary exploits, we are now running out of mysterious places beyond the place of our sights. The mountains are interlaced with roads, the vast seacoasts of the world are diced and sprinkled with our dwellings, and places remote to us a few years ago are now accessible from the air. Solitude may soon be a thing of the past. Man, supreme against nature, against creatures, must soon ask himself if he is supreme against himself. Has he planned for his own survival against his



own system of survival? Is the ancient system changing unnoticed by man, who now assumes the destructive character of fire, of wind, of chemicals, of evolution?

Evolution in the use of the earth is directly before us. Our occupation can now be likened to the onslaughts of the ice age or of drought or hurricane or earthquake.

The water is becoming unnatural. The air is changing its chemistry. The surface of the earth is being modified, its soil characteristics changing. These things which took centuries to evolve—air, water and earth—are now threatened with alarming change. It is alarming because these changes do not follow an intelligent and related program. They do not fit into a sensible pattern. Their comprehensive ramifications are neither appraised nor known.

We are pursuing a course which involves the quality of the earth itself. It is time for all civilized people not only to take a look at its so-called social structure but, more pertinently, to look at the physical structure of its environment.

In our organized society, in our desire for supremacy over competition, we have lost sight of some of the basic rules of the game. Ultimately we may lose the battle to the nature of things we choose to overlook and neglect. Our productivity, which creates waste, will outproduce itself.

The ultimate survival of man requires three things in his environment. Simply stated, they are wilderness, rural land and urban society. From man's position, this mixture is mandatory. Without one or the other the balance is upset. We draw closer to upsetting the balance as urban society encroaches beyond practical limits. In fact, an intelligent disposition of all elements falling within these three categories could well result in the ideal.

Let us dispose of these subjects in their order. Why not leave the mountain peaks in wilderness; why encroach on the Arctic or Antarctic regions? Why not leave the great deserts and the realms of storm and ice to serve eternally as the area of propagation of wildlife, as filter areas for our waters and our air? Great portions of the earth should not be trespassed upon but should be declared off limits to humankind. Contiguous country could be set aside as wilderness estate for parks and recreation, a place for man's occasional escape from his own society.

The rural areas should occupy all fertile stream valleys, meadows and plains. Likewise, they should be established on the basis of the quality of the soil to produce food and commodities useful to man. Agricultural zones automatically provide open space, as do wilderness areas.

The balance of the earth could be used for our urban society. If the problem of environment could be narrowed to urban life, we could come to grips with it. Uninhibited expansion, decentralization and all other characteristics of growth would follow predestined directions without trespassing into wilderness or into zones set aside for agriculture, rural life and open space.

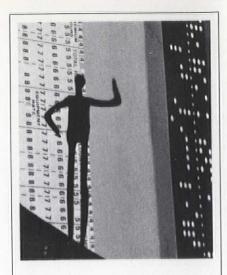
The urban society of modern man differs entirely from nature's society and cannot be integrated with it. It is futile to think of factories and warehouses in terms of compatibility with nature. It is equally fantastic to equate superhighways, rapid rail transit and airports with nonencroachment. Fumes dissipated from blast furnaces, smelter plants and combustion engines are lethal and do not provide fitting air for us to breathe. The supermarket, the drive-in threater, the drive-in hamburger joint are not conducive to the preservation of wilderness, nor can shopping centers, industrial parks and housing developments be thought of as open space.

Even minor alterations in the configuration of the land often change entire drainage patterns. Sewage and large-scale waste disposal pollutes the ground and the water. Intrusion drives away wildlife. Complete intrusion exterminates wildlife.

Urban man needs urbanized centers especially designed for his particular use. These centers are subjects for new formulas which, recognizing all the derivations and elements of natural phenomena, must produce new concepts in forms.

An intelligent use of the world in its vast capacity as it relates to nature and to man requires the utmost in self-discipline. We cannot settle the matter as easily as we did at the seashore when we inadvertently philosophized: Against the wind and the sea all things seem meager—the good, expendable, and the bad, correctable, for we can start all over again.

We are not at the seashore. All things are not correctable. We cannot joyfully accept self-destruction. We cannot build in the sand in the path of the tide. We must find higher and firmer ground.



Man, in whom the significance of all things ultimately resides, must assert his rightful role as governor of his own wit. No matter the intrinsic excitement of science and design, errant pursuits they become when man's image no longer guides.

Challenge of Our Age

## The Changing US Society

BY DR. JOHN A. LOGAN

The president of Hollins College suggests a broad historical and philosophical context in which professionals might consider environmental control.

EVERY GENERATION in modern history has had its problems, to be sure, and growing older has felt a sense of foreboding about the direction events were taking. But in this mid-20th century the situation is different not only in degree, but in kind from what it was in 1865 or 1765.

It is different not only because the rate of social and technological change has so vastly accelerated, but because we are faced in the world with an unprecedented welter of conflicting systems of values, of contending social and moral philosophies, which threaten to leave us without guidelines or points of reference in making important choices. Always before there has been an underlying consensus in the Western World which kept the range of choices within reasonable bounds, but now all certainly threatens to collapse when faced with an infinite number of alternatives.

To the extent that your professional careers involve the methodology of science and technology, you are relatively free of this sort of confusion. You face difficult problems, but they can be solved within frameworks of principles and practices which are accepted the world over. Science is one of the few branches of learning with a common language. But the moment you go beyond these relatively manageable professional concerns, much of this compactness and certitude dissolves. As artists, architects are faced with conflicts of taste; as parents, all of us find ourselves on the slippery ground of today's relativistic standards of behavior among the young; as citizens of the United States, we are confronted with a spectrum of national problems unparalleled in breadth and complexity.

Changes in our physical environment brought

on by advancing technology are fairly easy to comprehend, even if they are not always easy to cope with; but the Industrial Revolution has brought with it disturbing changes in the realm of ideas which we sense, but which it is more difficult to resolve into workable sets of principles for the management of human affairs. From about the year 1400 up to the First World War the dominant social values were those of the emerging and eventually triumphant middle class, the men of commerce and industry and the professions.

Characteristically, these values assumed the rationality of man and of the physical universe, and they celebrated the virtues upon which Western industrial civilization and the American dream were built—a regard for law and order, aversion to war as wasteful, the exaltation of thrift and efficiency as primary virtues, respect for private property and, above all, individualism. These values were both articles of faith and a program for action. Obviously they are still with us today and still dominate the American scene, but they are everywhere subject to questioning and pervaded by doubts.

Much of the uneasiness which characterizes the intellectual life of the 20th century revolves about the fact that these old values have been undermined, but that no new consensus has been achieved to replace them, if indeed they are outmoded. Never before in human history, for example, have we been faced with so many irreconcilable philosophies of government as in this century. How can there ever be any synthesis of such opposing doctrines as fascism or communism and representative democracy? How can we arrive at a workable idea of the nature and destiny of man amid the conflicting theories represented by, say, the Freudians and orthodox Christianity, Marxists and Existentialists? Is man a rational being possessed of freedom to choose good and evil as our democratic institutions assume? Or is he the creature of vast, impersonal, social and economic forces as Marxian determinism argues? The way we construct all of our social institutions rests on answers to these questions, and the world is deeply divided as to the direction we should take.

One might reasonably expect some help from our social scientists in this regard, but of recent years our sociologists and psychologists have retreated—one might almost say "escaped"—into a "scientism" and behind a screen of impenetrable jargon that makes their work less and less relevant to these burning questions. They have plunged deeper into empiricism, the collection of masses of observed data about particular, minute phenomena, so that in the words of one critic, they are "learning more and more about less and less,"

or simply documenting the obvious. Worst of all, there is little or no attempt at generalizing from these data, at constructing any theory of the nature of man.

Something like this has been happening in the arts as well. The "realistic" novel or short story (and the most serious motion pictures too) have in common a theme of frustration, inadequacy and guilt. The characters are caught in a trap of middle-class values. For the most part, these impressions are conveyed by the "slice of life" technique—a segment of human experience, often the more degenerate the better, is presented without commentary, often without an implied point of view, and frequently without compassion. The message seems to be, "here is life; isn't it awful, but what would be better?"

In painting and sculpture, abstractionism has reduced intellectual content by relying purely on color and form. As in literature, there is a tendency toward antirationalism and toward a reliance on sensual experience as somehow meaningful in itself, without any informing philosophy of life. If there is a philosophy, it appears more negative than positive. There is no affirmation of the value of human experience.

We can see these tendencies reflected on our campuses in the so-called "student revolt" which has concerned us recently. The young intellectuals who are leading this movement are true children of the 20th century in the sense that they have placed activism above contemplation and have adopted irrational means to achieve their ends. They have a heightened sense of injustice, for which we must admire them, but the methods they have chosen to right the wrongs in our society-the weapons of social revolution and class warfare-are destructive to the very foundations of a free society. Being fanatics, they abhor compromise, which is the essence of orderly government. Acting in the name of social justice, they are in actuality profoundly antisocial and nihilistic. If this tiny radical minority were to become the leaders of tomorrow, the Republic and its basic commitment to due process would be in grave danger.

So far I have been talking chiefly about the realm of ideas, but the changes which modern science and technology are working in our physical and social environment present us with numberless challenges which are either already fully developed or can be anticipated in the near future. The overwhelming fact of our time is the explosive growth in population and the concentration of these people in urban complexes. Whether something is done to check the headlong increase in population—and clearly something has to be done—in the next generation, there will be not

only more people in the world than ever before, but their distribution by age groups will be sharply altered. There will be proportionately many more young people and old people, with the breadwinning age group supporting both like the narrow waist of an hourglass. The implications of this, with or without a welfare state, are just becoming apparent for education, for health services, for law enforcement and for recreational needs.

Urbanization will happen no matter what, but the question of whether it is to be a blight or blessing will depend on how quickly we can superimpose some degree of planning and foresight on this presently uncontrolled phenomenon. Neither our cities nor our suburbs are true communities at the moment. Choked by traffic, our cities are decaying at the center, home of the very rich, the very poor and the unmarried, with large portions virtually unoccupied at night or on holidays. They contrast sharply with their many European counterparts which are genuine communities with green parks, bright fountains and buildings built to human scale.

We are all familiar with the urban problems of transportation, water supply and pollution above and below ground. The new suburbia has sprawled over the countryside almost before we knew it, and we are just now beginning to reckon the social costs of this phenomenon, with its dreary rows of houses, occupied by people who hope to move upward to something better, with its voracious demands for tax dollars, and its lack of focus for community life. Much of the sense of alienation and isolation suffered by Americans these days can be traced to the impersonality, the rootlessness and impermanence of this way of living.

In the world now taking shape, man will come to have nearly complete control of his physical environment, and he can make of it a paradise if he catches the vision of what might be, if he keeps a due balance between the works of man and of nature.

We are standing on the threshold of an era in which man will have the unlimited power of the atom at his disposal for works of peace as well as war, when he will be able to live not only on land, but beneath the sea and in outer space. Every kind of repetitive labor can, and probably will be, performed not by men but by machines electronically guided by programs fed to other machines.

There will be in the next half century material abundance in this country such as mankind has never seen, so that emphasis will shift almost completely away from problems of production to problems of consumption. Not only "blue collar" jobs, but also "white collar" jobs will be in large

part taken over by machines, so that hours of work will be steadily reduced while the number of jobs will actually diminish.

All of this obviously poses problems for a society built on a psychology of scarcity, with an ethical system founded on such principles as the Puritan gospel of work and thrift or Christian doctrines of charity and resignation. The relative affluence we now enjoy has already created lesions in the fabric of our society as our problems become less physical and more psychological. We are in great danger of becoming morally rudderless, unless we can supply new ethical directives for altered conditions of life and devise socially useful outlets for the energies and the creative and competitive urges which were once channeled into the struggle for survival.

There are limits to the adjustment the individual can make to multiple, radical change without losing his inner security and lapsing either into mindless conformity and amoral drift or rebellion and a sense of alienation and estrangement from society. Add to these other changes our increasing mobility, the pressures of urbanization and toward collectivization, the welter of conflicting ideas instantaneously conveyed by means of modern mass communication, and the growing size and complexity of social institutions, and it becomes increasingly apparent how important every element of stability and order and beauty are to the well-being of the individual. In an environment of clutter and ugliness, of fragmentation and decay, the noblest human aspirations atrophy, and the freedom and dignity of the individual will suffer an inevitable decline.

As architects and engineers you have a unique opportunity and a special responsibility to raise your voice against the desecration of the American landscape and to insist upon the creation of an environment which encourages rational and civilized solutions to the problems mankind faces. If our architecture is a reflection of our inner life, then we are in trouble as a nation.

Much of the work of our greatest names is brutal, much of our other building is uninspired, or designed in a spirit of planned obsolescence to be torn down as soon as the owner has his money out of it. One might understand this in a supermarket or a hamburger stand, even if one regrets it. But when the tax structure penalizes the builder of a Seagram Building because he has used good materials and provided an open plaza which delights the eye and soothes the spirit, and on the other hand encourages the construction of the featureless glass ziggurats of Manhattan, then it is time to look to our standards in earnest.



Kenzo Tange

# 'An Architect of the World'

BY ROBIN BOYD

KENZO TANGE HAS RAISED the spirit of architecture without repudiating the rational revolution of the 20th century. In hardly more than a decade of practice he has built a personal style consistently, brick by brick, or—to metaphorize more aptly—reinforcing rod by rod. This style is a sort of super-Functionalism, as different from early box-Functionalism as it is from all romantic visions of architectural beauty. His self-appointed task is to find the "essential and progressive function," the typifying or symbolic form of any human activity being sheltered. He wants to express the essence of social reality in the most enlightened structural terms, yet as naturally and unself-consciously as the realities are expressed in a peasant cottage.

He has become an architect of the world largely because his work is so intensely Japanese. For he has demonstrated to the world's great satisfaction that a unique regionalism may develop genuinely within the international modern idiom. There is nothing superficial about this; nothing in architecture is more abhorrent to him than the mincing mood of Japonica and the sweet, fey details of *shibui*. The smell of Japan permeates his work in a subtle, formal and often intangible way, reflecting not his emotional submission to the historical traditions of his land but his intellectual conquest of them.

He has been in the vanguard of recent structural advances, making early experiments and contributions to the development of most of the concepts that have excited the 1950s and the 1960s, including shell concrete, macrostructures, superspans and tension. He uses these devices not for their own sake so much as means to expand the limits of the universal language of architecture.

There is a monumental simplicity about the corpus of his career. His search for a creative

realism can be followed through two interweaving themes. One is the trabeation theme. Beams are significant in the Japanese tradition, and Tange has played with them in many forms. The building which launched his career, the Hiroshima Peace Hall designed in 1949, is in concept no more than one long beam held high on two uneven rows of props. Later he exploited the negative timber formwork in separate celebration of individual concrete beams—superheavy, square-cut, criss-crossed—as in the most photographed building of his early years of practice: the Kagawa Government office building at Takamatsu (1955-58).

Later, he encouraged the individual beams to expand until the gray mass of their concrete dominated all other elements. Windows disappeared behind narrow slits between the mammoth planks. Thus, structure was as elemental as in a giant's log cabin in the Kurashiki City Hall of 1958-60. Logically, in Tange's next move, whole buildings or massive sections of buildings became logs or simple beams, end supported, interspersed with others at various levels high above the ground, each one spanning some hundreds of feet between the substantial posts of service towers. This concept was glimpsed in his famous plan for Tokyo of 1960 and will first be realized when the Yamanashi Press and Radio Centre at Kofu City is finished.

In these later buildings Tange's style has steadily grown more personal and mature, and an earlier habit of taking brief quotations direct from the revered master, Le Corbusier, has been broken.

Meanwhile, Tange was developing his second theme of plastic form. He gave notice of this objective at the very beginning. His Children's Library near the Peace Hall at Hiroshima was built during 1951-52 around a concrete trumpet bell sprouting from the ground. He restated the plastic theme at intervals, whenever the enclosure

of a big space encouraged it: at the Ehime Centre in 1952, at Shizouka stadium in 1955, in the mass-housing blocks of the plan for Tokyo. And it was in a variation on this theme that he made his most impressive contribution to architecture so far: in the Tokyo stadiums for the 1964 Olympic Games, commissioned in 1961.

These two buildings, linked by a long, rectilinear and robust podium, are tensile structures of fairly familiar pattern. Masts prop up woven cable webs covered with steel decking; nothing very new in the avant-garde. Yet here for perhaps the first time tension was used in an assured and convincing way as a creative force in architecture. The two stadiums are individuals related to each other like sisters. The big one, with central swimming pools and long side tiers of seating, is a bland, majestic, symmetrical space. The smaller one, for basketball and drier sports, is like a giant snail shell, a whirlpool of space around a single eccentric mast.

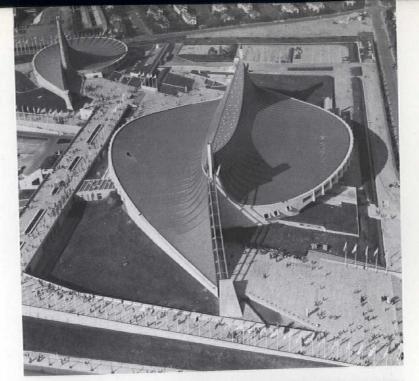
In this sisterly complex each detail of the structural process is conceived with directness and openly displayed. Each shape is convincingly practical. The consistent discipline operates in a benign and flexible way. The complementary external forms are monumental and international and yet are sometimes startlingly Japanese, as when the canted spurs that hold the main cables to their masts are seen silhouetted like the *chigis* of an ancient shrine against the sunset. Above all, the internal spaces transport the spirit.

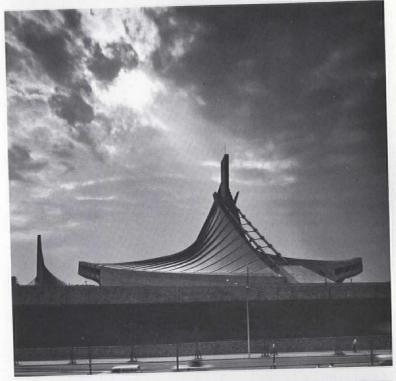
It is hard to think of any other building complex anywhere that comes closer to realizing simultaneously all the highest promises of 20th century architecture.

An Honorary Fellow of the AIA, Mr. Boyd is a practicing architect with the Australian firm of Romberg & Boyd and the author of Kenzo Tange (Braziller: New York, 1962). A contributor to US periodicals on the subject of architectural criticism, he was visiting Bemis Professor of Architecture at MIT in 1956-57.



Olympic Games Complex: Two gymnasiums—the main one for swimming and diving competitions and the smaller annex for basketball—will serve as the core for Tokyo's sports center.

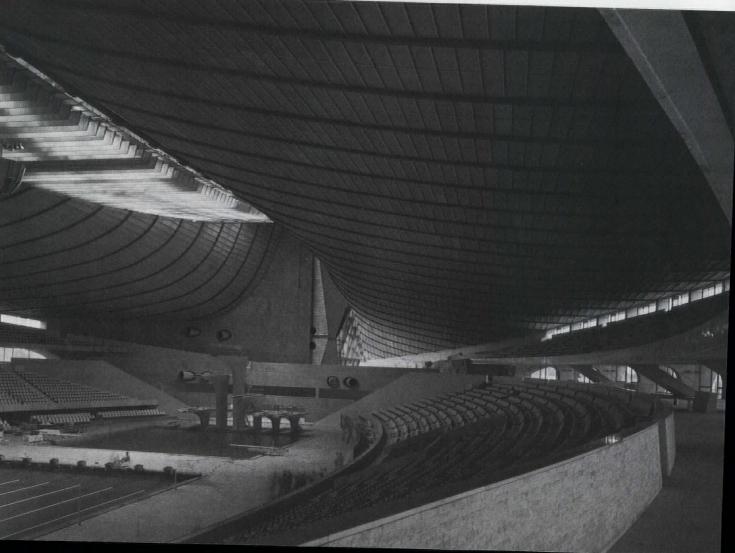


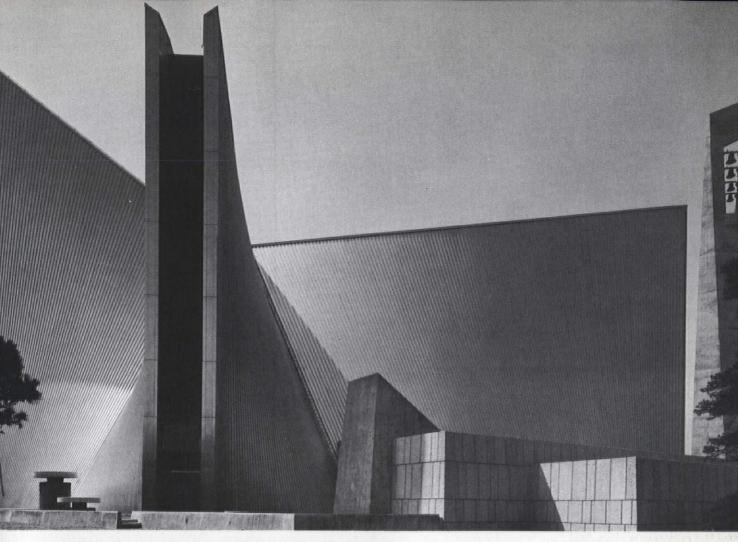


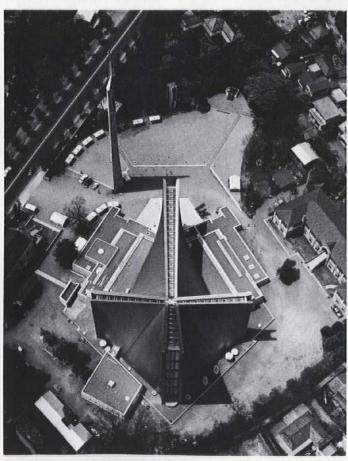




Main Gymnasium: Under the cablesuspension roof is probably the finest structure ever built for competitive swimming, according to the critics.

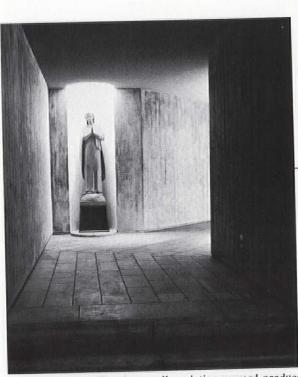




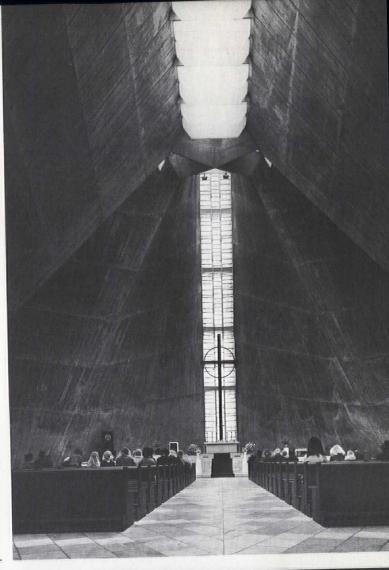


Tokyo's Catholic Cathedral: Eight hyperbolic paraboloids with unexpected twists comprise what Boyd calls "a majestic space in repose."





Crucifix Skylight: The four walls pointing upward produce a building which is at once Catholic and Japanese.





### URBAN DESIGN WORKSHEET 10



PREPARED BY PAUL D. SPREIREGEN, AIA, FOR THE COMMITTEE ON URBAN DESIGN

## A Program for Community Action

Nearly 40 states have now held conferences on beauty and conservation. These conferences were, in a way, extensions of the White House Conference on Natural Beauty held in May 1965.

In February of this year Hawaii held a three-day Governor's Conference on Natural Beauty and Community Appearance. The summation of findings of this conference was delivered by Aaron Levine, current president of the American Society of Planning Officials (ASPO) and executive vice president of the Oahu Development Conference (ODC). We present it as a worksheet because it is an exemplary program of action for every American metropolis. It is also an appropriate synthesis of ideas related to "Technology, Environment and Man."

Neither Mr. Levine's summary nor the conference itself was an isolated product—an event without ancentry. Preceding this conference was a well-organized program of discussion by Hawaii's citizenry and community leaders, tracing back many years. It was in 1960 that the idea of the ODC was conceived as a vehicle for a broad community discussion of planning and development. It is concerned with the entire island of Oahu. In effect, Oahu is Honolulu's metropolitan area.

After its establishment in 1962, ODC held numerous discussion meetings between community organizations, private citizens, public officials and public agencies. Three fundamental planning problems were selected for ODC policy consideration: comprehensive planning, traffic and transportation, and urban renewal and redevelopment.

By the next year ODC published "A Transportation Policy for Oahu" and "A Workable Program for the Renewal of Honolulu," an outline of action covering regulatory ordinances, planning, neighborhood evaluation, administration, financing, relocation and citizen participation.

In 1964 a broad statement called "Proposed Goals and Objectives of Comprehensive Planning for Oahu" was released. The significance of all of ODC's ideas is that they were products of the discussions of conscientious citizens informed by capable professionals. ODC recognizes that in our society informed citizens and dedicated community leaders are the prime resources for community action.

Thus, the conference had a solid foundation. For all who had been involved in the discussions or who cared about their state it was an opportunity to witness a grand presentation of everyone's thinking—a presentation honored by gubernatorial sanction. Ideas were becoming policy, officially.

With this background—essential to a sound foreground of discussions—the Hawaii Governor's Conference was held. Mr. Levine's summation speaks for itself in outlining the next courses of action.

P.D.S.

AT THE VERY OUTSET, I should confess that some of us approached the planning of this conference somewhat apprehensively, questioning whether anyone would be interested in attending, and then wondering what would happen if you did come. The committee did not want to stage just another conference that would disappear into the wings after the last speaker. Nor did we want merely to talk to each other with little impact beyond these walls.

Therefore, we placed great emphasis on broad community appeal with business and citizen organization involvement. Everyone was invited; everyone was welcome. The philosophy of this conference rests on the premise that the problems and paradoxes of our state and its islands cannot be solved by government alone, or by a select few people alone. This must be a total community effort—a genuine teamwork approach.

I can tell you now that all our fears about holding the conference vanished on the very first day of the sessions. A strange phenomenon takes place at meetings of this type. Almost imperceptibly, a sense of boredom and dullness can begin to penetrate the sessions at the very outset and never depart; or an air of excitement and interest can take hold and prevail. To our delight, the latter happened!

Enthusiasm—We could sense your enthusiasm in the discussions on the lanai and in the meeting rooms. You were not just being polite in your applause or in your comments. You really were interested and animated by what was being said!

That sense of excitement about the future of Hawaii must continue to grip our attention. I believe that we are witnessing here a real commitment by each of you to the cause of natural beauty and community appearance. This is particularly exciting to those of us from Hawaii who attended the White House Conference last May. We left Washington then with a commitment to help preserve the beauty of our country by preserving the beauty of our own state. Each of you can leave here with that same sense of commitment: Things must be done in *your* community to preserve the beauty of Hawaii. It demonstrates once again the power of an idea, particularly when that idea is sound and its time has arrived.

Problems and Paradoxes — We have devoted three days to a discussion of the problems and the paradoxes that confront our growing state and our expanding communities. We have had the benefit of the varied viewpoints of experienced persons from home and afar. We have had some time to ask questions, some time to chat and some time to exchange ideas.

This conference helped us focus problems in clear perspective. It furnished specific ideas and possible approaches to problems that many of us have been concerned about for months and, sometimes, years. We recognize that some of the solutions have yet to be discovered. But now we are better prepared to proceed more effectively, to identify the problems, to perceive the experience and knowledge of our own state as well as the mainland.

But what happens now that we have reached this point? As conference summarizer, I could present a carefully detailed description of what transpired these past three days. But I have too much respect for our colleagues of the newspaper profession to assume that I could rival them in reporting the highlights of the 26 presentations made here.

Perhaps I might select two or three of the speakers' presentations and concentrate on those. But that is impossible, because I would not know which ones to select, since all were so appropriate and each uncovered another facet of this gleaming jewel we treasure as our state.

I prefer to summarize this conference not by looking back at the past three days and describing what has been said, but rather looking ahead and underlining what we have recommended for the future.

Planning—First, there is urgent need for us to consider the *total* environment in our planning, not just a piece here and a piece there. We should base our plans on an understanding of ecology. We must be sensitive to the importance of maintaining the delicate equilibrium between man, plants and their environment.

We cannot slash hillsides and then expect them to behave. Along our highways we cannot install plant materials that are totally foreign to that environment and then expect them to flourish.

The skills of the architect, the landscape architect and the professional planner should all be utilized on design teams for community planning.

For Honolulu a comprehensive development plan should be prepared and adopted that would enunciate land uses, traffic circulation and openspace relationships. This would serve as the guide for both public and private development, occurring here at an unprecedented rate.

Particular Ideas—Since so many ideas emerged from this conference, permit me to list some of them briefly:

We should constantly explore new and better ways of planning our state. It has been recommended that a *model development act* be prepared to simplify our zoning. Zoning would be used as a base for conventional development at conventional densities. The model act, however, would

provide a comprehensive development ordinance which would *require* a quality product prepared by a professional design team. This would permit densities, intensities and compatible mixed-land uses sometimes in excess of conventional requirements. The act should also include a model performance standard policy manual to provide guidelines for evaluating these plans.

Planned-unit development and the planneddistrict concept in city-county zoning ordinances would encourage flexibility and help provide open space. Both these techniques are applicable to areas as small as four acres.

We should develop a hillside policy which would eliminate excessive terracing and massive grading of hills. Such a policy would encourage clustering while preserving hill slopes to the maximum possible extent.

We must prepare urban design studies of such landscape features as Diamond Head and Punchbowl and their environs. We should be concerned not only with the views from Diamond Head and Punchbowl, but also with the vistas of Diamond Head and Punchbowl from strategic points in and around the city.

We must develop flood plain zoning and natural resources zoning provisions.

In subdivision regulations, we must consider dedication of open space or payment in lieu thereof on a varying basis, according to total tract sizes.

Open-Space Program — We must undertake a comprehensive open-space program for each county and town, utilizing open space to separate incompatible land uses. Open spaces in cities and towns should perform more than one function and should serve more than one age group.

We must accelerate open-space acquisition by utilizing the federal incentive programs. Each year that we delay, the cost increases and the supply of open land diminishes.

We must develop a statewide resource inventory to identify the outstanding natural and cultural assets of Hawaii. The work of Prof. Phillip Lewis in the state of Wisconsin demonstrates a brilliant technique to accomplish this. Unless we identify our needs and act now, we may obliterate the very resources and assets we will need in 20 years.

We must consider the use of scenic easements to preserve important vistas. To acquire land in fee, we must consider installment purchase over an extended period, accompanied by tax relief incentives. We must explore voluntary covenants for private property. There are several cases in which owners or developers are willing to accept certain continuing restrictions.

We must develop easement agreements between





the state, counties, plantation owners and large land owners to provide public access through agricultural land to public recreation areas.

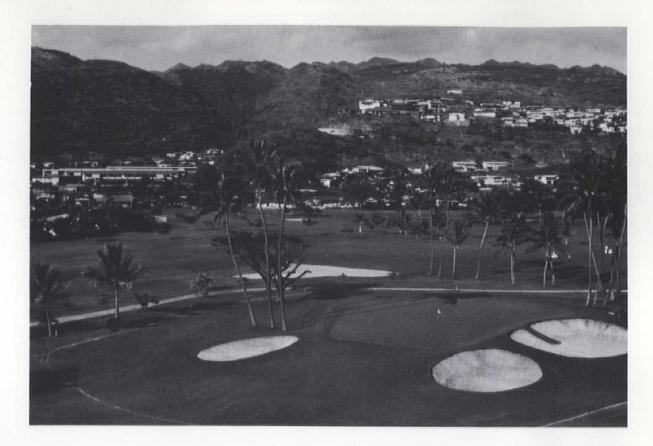
Land Use Law—We should recognize the pioneer character of our Land Use Law and should provide ample opportunity to implement it.

At least 1½ years before the land-use district boundaries are revised in 1969, the Land Use Commission should be funded to establish a citizens' advisory committee on each island. The committees should be composed of "consumers" of the law as well as its administrators and planners. Staffs should be furnished to these citizen committees to help gather and present the data and to prepare recommendations. This would establish an informed dialog between the public and the Land Use Commission.

In the interim, an additional planner should be furnished to the Land Use Commission to assist landowners in developing their presentations to the Commission.

Regarding our conservation districts, subzones should be developed to permit certain uses that are tailored to the special characteristics of the land as well as the objectives of the particular district.

The concept of the "highest and best use" of land should be carefully examined to ensure that taxation is encouraging the highest and best use for the long-term benefit of the total community. The relationship between the general plan, the county zoning map and assessment practice should



be analyzed to make certain that this concept is not escalating land prices in some areas.

Although a tree planting program is underway in Honolulu, a really massive tree planting program should be initiated throughout the state, and Honolulu's accelerated. As one speaker stated, "a few well-placed trees can help correct the worst structures."

To ensure an adequate future supply, nurseries for palm trees and other trees should be established now. Large trees as well as historic trees should be earmarked and protected. Adequate budgets should be provided for maintenance of landscape installations along highways, around public buildings and in public open spaces.

Shoreline controls are needed, not only to prevent pollution but also to preserve the ocean views from the road. Public access to beaches and shorelines should be protected. We must explore whether present laws designating the high water mark as the private property line affords adequate access and protection for the public.

Ravines and slopes should serve as green belts, natural parks, pedestrian ways or equestrian paths. Streams and rivers should be made delightful to look upon. They should not be placed in culverts or in concrete ditches to destroy their beauty.

Highway Design—We must examine freeways, major highways and bridges now in the design stage to improve not only their appearance but, equally important, their long-term functional and esthetic impact on the adjacent terrain. Blocking a gulch with a freeway on fill may be less costly today than placing the same freeway on a handsome viaduct. But what of the future problems of drainage or the future needs of recreation in the valley area?

Freeways and major highways should be developed through a team approach at the very outset, starting with route selection and utilizing the architect, the landscape architect and the planner as well as the engineer.

To assist our State Transportation Department in the implementation of the 1965 Highway Beautification Act, a Statewide Advisory Committee should be appointed.

We must establish visual continuity between all the elements of street furniture. We must establish a coordinating system between the state, the city-county and public utility firms for the selection and installation of appropriate street furniture. Appropriate color and good design must be the watchword for all street furniture. We must keep a high level of maintenance for all signs, lamps and standards, recognizing that positive visitor reaction to community appearance constitutes a major economic asset. We must establish strict criteria for installation and upkeep of vending machines in public areas.

We must establish design control or standards on construction barricades. We can cite business

Mr. Levine is an Honorary Associate Member of the Philadelphia and Hawaii Chapters AIA.

firms for their design and maintenance of street furniture.

We must explore and develop all possible financing methods for relocating overhead utility lines in underground installations. For example, we can consider urban renewal assistance where appropriate. When streets in older sections are being improved, the relocation of overhead utilities should be accomplished simultaneously. In new developments, the cost of relocated utilities should be added to the mortgage, rather than to the utility rate base. Joint programs of underground installation with other public and private utilities should be encouraged. Phased programs for total underground relocation in certain urban sections of Honolulu should be initiated.

Junkyards—We must establish a committee to evaluate and recommend the various types of screening between the highway and the junkyard.

We must enact legislation to modify the Motor Vehicle Code to speed up title clearance on abandoned and junked vehicles.

We must study scrap processing facilities on the islands to determine whether it is practical to install a large shredding plant. As an interim measure, we might consider the use of portable units for salvage work. We must encourage the National Auto and Truck Wreckers Association to conduct its local Beautification Award program among our local firms.

The continued dumping of treated sewage in Kaneohe Bay should be investigated immediately. Changes either in the system or in the location of the lines should be considered at once.

The proposed Water Pollution Control Regulations should be adopted. They should include specific features such as provisions for pollution control due to silt-laden run-off water.

Underwater parks should be developed for local and visiting scuba divers. Conservation measures should be enacted to preserve wildlife as an important element of natural beauty. Hawaiian wildlife has suffered greatly in the past and now some species are actually in jeopardy.

Education — We must conduct a continuous program of public education to stimulate pride and responsibility in cleaner, safer and more attractive surroundings, with special emphasis on youth groups.

We must initiate strict enforcement of litter laws with stiff penalties for offenders, such as paying a fine and then cleaning up a mile of roadway.

The Department of Education and other educational institutions throughout the state should expand their curriculum about environment in the preschool, nursery school, elementary school and high levels, to instill not only a civic conscious-

ness, but also a conservation consciousness. This educational process should be extended to include citizen board and commission members. In addition, training courses should be developed for teachers to instruct in gardening. The Parks Department and other recreation and conservation agencies could furnish the skills, the laboratories and the materials for these courses.

Citizen Action — A coordinating committee should be established to pursue the recommendations of this conference. Continuing involvement of all types of citizen groups in the community should be sought on each island.

To focus citizen action and citizen organization on "Hawaii Tomorrow," we must establish a statewide federation for beautification and planning. It would assist government and would be constituted of delegates from all the organizations that wish to participate.

It also has been recommended this morning that "Hawaii's Year of Beauty" be proclaimed to enable all public and private groups throughout the state to pursue the objectives and recommendations of this conference as part of their programs. This is an exciting proposal.

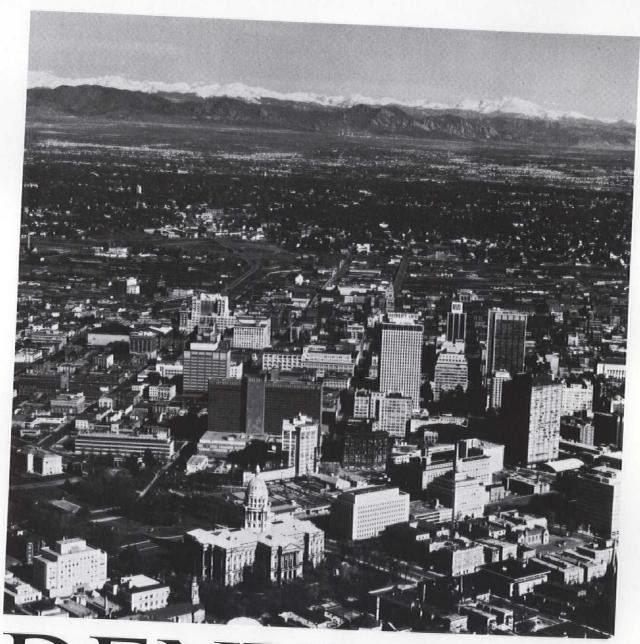
Continuation of Interest—There has been continued concern expressed here these past few days that our interest would be allowed to disappear once we leave. This must not happen!

Conclusion — This summary began with thoughts on the sense of commitment that each of us should feel about preserving the natural beauty of our state. Earlier in this conference the comment was made that we "would have to put our money where our mouth is" to attain the objectives of this conference. We must be willing to offer more than platitudes.

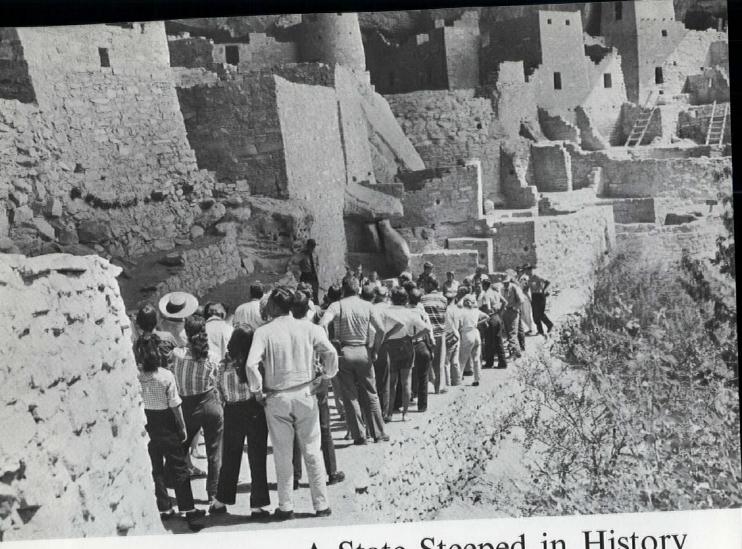
Just a moment ago, I mentioned the need for responsible and long-term citizen organization and citizen leadership. In that regard, the Oahu Development Conference wishes to demonstrate its esteem for this conference. It gives me great pleasure to report that ODC is willing to assume its responsibility to Oahu by bringing together all segments of the community to work with the three levels of government, the aim being to accomplish the recommendations of this conference. We hope that other groups on Oahu and the Neighbor Islands will also commit their efforts to this purpose.

All of us are grateful to the governor, John F. Burns, for convening this assembly. Nowhere in the nation is the President's statement, quoted in our program, more applicable: "The beauty of our land is a natural resource. Its preservation is linked to the inner prosperity of the human spirit."

That is why we have come here.



DENVER'66



## A State Steeped in History

#### BY ROBERT J. MCQUARIE

As exciting as the natural grandeur are the past events of Colorado, which possesses an equally vital present and looks toward a promising future.



ARCHITECTURALLY, Colorado's history can be traced back to cliff dwellings still evident today at Mesa Verde in the southwestern part of the state, the result of the

great Pueblo period of culture that reached its peak about A.D. 1300. The earlier people such as the Sandia and Folsom men, named after the areas in New Mexico where their artifacts were first found, were nomadic hunters. Some time between 5000 and 200 B.C., corn was introduced into the Southwest, and the rich cultures of the Basketmakers and later the Pueblos began their development.

The early Basketmakers left little for current investigators. As agriculture took hold in many areas of Colorado, the people shifted from their nomadic way of life to a more sedentary one, in

which they had more leisure time to develop their baskets and weaving techniques, their tools, weapons and pottery. Within several hundred years the various groups had developed distinct and regional cultures, which by A.D. 1100 had vigorously expanded and spread into new areas.

The prehistoric period in the Southwest came to an end in 1541 with the coming of Coronado and his Spanish Conquistadores who were in search of the fabled Seven Cities of Cibola in the vicinity of present Colorado. These men recorded the first written history of this area.

During the more recent historic times numerous Plains Indian tribes used Colorado as their hunting grounds. In particular, the Cheyennes and Arapahoes on the plains and the Utes in the mountains claimed most of the area of the present state. These nomadic hunters of the buffalo, deer and antelope lived in tepees and made parfleches or rawhide containers rather than baskets or pottery for storing the meat and the berries and roots.

By 1807, just four years after the Louisiana Purchase which incorporated the eastern half of Colorado, the Indians were becoming aware that white men had an interest in their ancestral lands.

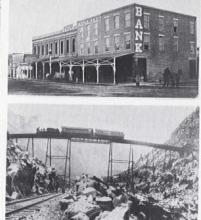
Mr. McQuarie is supervisor of interpretive services for the State Historical Society of Colorado.













Colorado's early history is associated with the Pueblos, whose cliff palaces still stand in Mesa Verde National Park (across page), and the nomadic Utes (above). Other scenes depict the Gold Rush and its ensuing industry; Central City and Denver, around 1865; and the development of the railroad in the '70s.

Lt. Zebulon M. Pike had made the first official expedition into present Colorado, where he attempted to climb the peak that now bears his name. Other official explorers would follow in later years such as Maj. Stephen H. Long, Lt. John C. Fremont and Capt. John W. Gunnison, but the real shock troops of civilization were the mountain men and the fur traders who established the fur trade in the Colorado Rockies from 1820-40.

Such trappers and traders as the Bent brothers, Jim Bridger, Jim Baker, Louis Vasquez and Kit Carson were typical of the breed of men who penetrated the mountain valleys in search of beaver skins and later, after beaver pelts declined in price, placed their efforts in the buffalo robe trade. Trading with the Indians was enhanced by the establishment of trading posts such as Bent's Fort (1832); Fort Vasquez (1835), north of Denver; and Fort Pueblo (1842).

The end of the fur trade saw other developments. Spanish settlers from New Mexico moved into the San Luis Valley and founded what is considered the first town in Colorado, San Luis, in 1851. Other Spanish settlements were soon founded, and by 1852 the United States had built

Fort Massachusetts in the Spanish valley, only to be replaced by Fort Garland in 1858, which still stands today.

As had been attested to by several early Spanish expeditions into Colorado, all interest was not in land or furs but in mineral wealth as well. The Spanish failed to find any substantial amounts of gold or silver, but nevertheless the gold and silver were here. Later arrivals found some traces and a few nuggets and helped spread the rumors of gold in the Colorado Rockies.

In 1858 rumor became fact when the Green Russell party of Georgians found gold in Little Dry Creek near present-day Denver. The Colorado Gold Rush was on. "Pikes Peak or Bust" became the byword of thousands in 1859 as they stampeded to the state on foot, on horseback, in wagons, and even pushing wheelbarrows. Not all were successful; many trudged home "busted." Others, however, remained and united the mining camps of Auraria, St. Charles, Montana City and Denver City into Denver (named after Gen. James W. Denver, territorial governor of Kansas), eventually to become the capital of Colorado.

Other strikes were followed by other towns.

John H. Gregory made his big strike in the Clear Creek canyon area on May 6, 1859, and shortly thereafter Central City and Black Hawk were founded near his strike. On both sides of the Continental Divide and in between, strikes were made and followed by towns.

The continuous stream of new citizens resulted in the creation of Jefferson Territory, as the people no longer wished to be a part of the territories of New Mexico, Utah, Nebraska and Kansas. Finally on February 28, 1861, the law was signed creating Colorado Territory and a short time later President Lincoln appointed Col. William Gilpin the first governor.

The Gold Rush accounted for the first extensive settlement of Colorado, but the decade of the '60s saw this very same Gold Rush involve Colorado in many problems—difficulty in extracting the refractory ore; the Civil War which claimed 14 percent of the population for soldiers; and warfare with the Cheyennes and Arapahoes on the plains which resulted in the Sand Creek Massacre of November 29, 1864, still one of the most controversial topics of Colorado and western Indian history. The problem with the Indians continued well into the '70s.

Each new decade thereafter brought Colorado some progress. During the '70s Colorado connected its mining camps and itself to other states and territories by railways; developed agriculture; founded new towns; increased its population to about 40,000; and on August 1, 1876, became the 38th state to enter the Union. She became known as the "Centennial State," in honor of the 100th anniversary of the Declaration of Independence.

During the 1880s and '90s Colorado expanded even more as new silver and gold rushes once again created overnight wealth and prosperity in such towns as Leadville and Cripple Creek. The opulence was also seen in other cities and towns. For example, the architecture was no longer log or plank cabins but magnificient mansions and opera houses similar to the one that is still used in Central City. Irrigation systems and dry farming amplified the importance of agriculture and new crops, such as sugar beets, added to the prosperity. Colleges were built, and livestock and wool production surged upward. The overproduction of silver and the panic of 1893 hit hard, but Colorado rallied and regained her dignity and prosperity, ready to face the 20th century.

By 1900 urbanization and industrial growth were spreading throughout the state. The Ute Indians on the western slope had been removed to reservations in the southwestern corner, leaving the area open to white settlement.

The mineral wealth of the state was pursued and miners, mine owners and laborers, all Col-

oradans, rode through the labor troubles and the problems of the period of industrial development.

Colorado began increased dam construction and irrigation to rid herself of being included in the misnomer, the "Great American Desert."

In addition to her economic growth, Colorado also underwent many social changes up to 1914, as did the rest of the nation. Two national parks—Mesa Verde National Park and Rocky Mountain National Park—were created, giving a boost to tourism in the state.

World War I came and went but not without having some effect on Colorado. The farmers suffered a postwar distress, while the mining industry had progressed somewhat. The Climax Company had opened a molybdenum mine atop the Continental Divide almost within sight of the state's most famous silver strike area of Leadville. Molybdenum's importance was not apparent, however, until the later years, during the Second World War and the period immediately following.

The 20-year period between the two great world wars saw a lag in Colorado's population growth, its mining industry and its agriculture. The state during this period also rode through the storm with the Ku Klux Klan, which rose to power for a few short years.

The Second World War and its postwar years once again saw Colorado's farmers and ranchers at work, and the defense planning and building that had taken place during the war did not cease. The Atomic Energy Commission built a \$43 million plant between Denver and Boulder, followed by six other plants within a few years, for the processing of uranium ore of which the state produces nearly 22,000 tons daily. Training of the nation's military in Colorado also continued and in 1959 the multi-million-dollar, 17,500-acre US Air Force Academy located near Colorado Springs, graduated its first class. Defense spending also caused the Martin Company to open up a new plant near Denver for the production of the Titan Missile family. The defense of the nation was further strengthened with the development of the underground combat headquarters of the North American Air Defense Command (NORAD), located under Cheyenne Mountain, which went operational on January 1, 1966.

Today Colorado's face is sharply different from that of 10,000 years ago when nomadic hunters roamed the hills and plains. The state's urbanization, economy and cultural picture is ever-increasing, and nearly 1,300 schools at the elementary, secondary and college level are educating for the continued political, economic and cultural growth in a setting of rolling plains, mesas and 14,000-foot mountains, dotted and crisscrossed by crystal blue lakes and streams.

#### **MAGENTA**

BY THOMAS HORNSBY FERRIL

NCE, up in Gilpin County, Colorado,
When a long blue afternoon was standing on end
Like a tombstone sinking into the Rocky Mountains,
I found myself in a town where no one was,
And I noticed an empty woman lying unburied
On a pile of mining machinery over a graveyard.

She was a dressmaker's dummy called Magenta. I named her that because, all of a sudden, The peaks turned pink and lavender and purple, And all the falling houses in the town Began to smell of rats and pennyroyal.

The town was high and lonely in the mountains; There was nothing to listen to but the wasting of The glaciers and a wind that had no trees. And many houses were gone, only masonry Of stone foundations tilting over the canyon, Like hanging gardens where successful rhubarb Had crossed the kitchen sill and entered the parlor.

The dressmaker's dummy was meant to be like a woman: There was no head. The breasts and belly were A cool enamel simulating life.
The hips and thighs were made adjustable. Encircling and equidistant from A point within, through which, apparently, The woman had been screwed to a pedestal, But the threads were cut and the pedestal was broken.

I propped Magenta into an old ore-bucket, Which gave her a skirt of iron up to her waist; And I told a mountain at some distance to Become her lilac hair and face and neck. It was the fairest mountain I could find, And then I said, "Magenta, here we are."

And Magenta said, "Why do you call me Magenta?"

The sky no longer glowed rose-aniline, So I looked at the town and thought of a different reason.

"Magenta's a mulberry town in Italy,"
I said, and she said, "What a very excellent reason!"
(I said no more though I was prepared to make
A speech a dressmaker's dummy might have relished,
About a naked Empress of France,
And how she held her nightgown at arm's length,
And named the color of her silken nightgown
In honor of the battle of Magenta,
The very year, the very day in June,
This mining camp was started in the mountains.)

The sun was low and I moved to a warmer flange On the pile of broken mining machinery, And Magenta said, "It's always afternoon Up here in the hills, and I think it always was."

"Why always afternoon?" I said, and she answered:

"Mornings were crystal yellow, too hard to see through; The realness didn't begin until afternoon; We both are real, but we wouldn't have been this morning Before the blue came up. It was always so: Nothing real ever happened in the morning, The men were always digging for gold in the morning; They were dreaming deep in the earth, you never saw them, But afternoons they'd come up to bury their wives."

Magenta stared a moment at the graveyard.

"These women wanted me to be their friend. I spent my mornings with them making believe. They'd sit around me talking like far-off brides Of things beyond the mountains and the mines; Then they would get down on their knees to me, Praying with pins and bastings for my sanction.

"Then they would look into mirrors and come back, They'd look out of the windows and come back, They'd walk into the kitchen and come back, They'd scratch the curtains with their fingernails, As if they were trying to scratch the mountains down, And be somewhere where there weren't any mountains.

"I wasn't what they wanted, yet I was.
Mornings were never real, but usually
By noon the women died and the men came up
From the bottom of the earth to bury them."

"Those must have been strange days," I said, and I tossed A cog from a stamp-mill into a yawing shaft. We listened as it clicked the sides of the mine And we thought we heard it splash and Magenta said:

"The men would measure in cords the gold they hoped To find, but the women reckoned by calendars Of double chins and crows-feet at the corners Of their eyes. When they put their china dishes on The checkered tablecloth they'd say to themselves 'How soon can we go away?' When they made quilts They'd say to the squares of colored cloth 'How soon?'

"They could remember coming up to the dryness Of the mountain air in wagons, and setting the wheels In the river overnight to tighten the spokes; But by the time they got to the mountains the wheels Were broken and the women wanted the wagons To be repaired as soon as possible For going away again, but the men would cut The wagons into sluice boxes and stay.

"Each woman had seven children of whom two Were living, and the two would go to church. Sometimes the children went to the opera-house To see the tragedies. They can still remember The acrobats and buglers between the acts."

I spoke to Magenta of how the graves were sinking, And Magenta said, "All this is tunneled under; I think some of these ladies may yet find gold, Perhaps," she sighed, "for crowns," and she continued:

"Maybe you never saw a miner dig A grave for a woman he brought across the plains To die at noon when she was sewing a dress To make a mirror say she was somebody else."

"I never did," I said, and Magenta said:

"A miner would dig a grave with a pick and shovel Often a little deeper than necessary, And poising every shovelful of earth An instant longer than if he were digging a grave, And never complaining when he struck a rock; Then he would finish, glad to have found no color."

I didn't know what to say to that, so I said:

"It's getting dark at approximately the rate
Of one hundred and eighty-six thousand spruces per second,"
And Magenta smiled and said, "Oh, so it is."

And she said, "Up here the men outnumbered women, But there were always too many women to go around; I should like to have known the women who did not need me." She indicated that their skirts were shorter.

"And so should I," I said. "Are they buried here?"

Magenta said, "I think there were hardly any: They came like far-off brides, they would appear Each afternoon when the funerals were over. Some disappeared, some changed into curious songs, And some of them slowly changed into beautiful mountains."

She pointed to a peak with snowy breasts Still tipped with fire and said, "The miners named That mountain Silverheels after a girl Who never was seen until along toward evening."

"This is an odd coincidence," I said, "Because I've been using that mountain for your head."

Reprinted with permission from New and Selected Poems, Harper & Brothers, New York, 1952. Mr. Ferril will read from his own works at the annual luncheon of the National Council of Architectural Registration Boards June 24.



## Denver Reshapes Its Future

#### BY J. ROBERT CAMERON

The Mile High City's efforts in urban renewal may be on a somewhat modest scale, but the architectural profession is playing a significant role.



A LITTLE OVER 100 years ago, urban renewal in Denver would have been easy. With the exception of a scattering of Indian teepees and the log cabins at the confluence

of Cherry Creek and South Platte River, the windswept prairie at the foot of the Rockies stood ready for the redeveloper. During the next 100 years, log cabins were replaced by the Capitol Hill mansions of the gold and silver barons. In addition to the great wealth flowing out of the mines, cattle and sugar beets added to Denver's affluence.

During the '20s and '30s, Denver emerged as a major distribution center for the entire Rocky Mountain area. The city stood there in its high-heeled boots and Stetson hat, threw out its chest and called itself the "Capital of the Rocky Mountain Empire." Young men from across the country, stationed at Lowry Air Force Base, Fitzsimons General Hospital, Buckley Naval Station and the Army's 10th Mountain Division, flocked into Denver by the thousands and liked what they saw. The man in the bomb-bay of a B-24 over Germany, the sailor on the flight deck of a carrier in the South Pacific and the GI in the foxhole of Okinawa said, "When I get out I'm gonna live in Denver." The late '40s and early '50s witnessed a phenomenal growth in Denver and its metropolitan area.

But while Denver was enjoying its great boom, it was also experiencing great social as well as physical changes. New subdivisions with bright and shiny new houses, open space for parks, new

schools and playgrounds pushed out onto the prairie and into the foothills. Older neighborhoods were rezoned. Old single-family residences were converted to multifamily units. Some of these conversions were made with the approval of building and zoning officials; others were done illegally.

Denver's vigorous young mayor, Quigg Newton, recognized the need for slum and blight prevention. New codes and ordinances governing building, zoning and housing were adopted. The Federal Housing Act of 1949 offered opportunities for a new concept of rebuilding cities through "urban redevelopment." Denver, however, was slow to recognize the benefits federal assistance could bring to a new city in programs of rehabilitation and conservation. But by 1955 and 1956, the city was becoming aware that its slums and blighted neighborhoods were growing at a rapid pace, and that it must take positive action to stop the proliferation of blight. In 1958, the State of Colorado established the Colorado Urban Renewal Law, which permitted Denver and other cities to establish urban renewal authorities and provided them with tools to carry out programs of slum elimination and prevention.

Denver launched its first urban renewal program in an area a mile west of downtown, known as Avondale. As in many cities starting urban renewal programs, Denver's efforts were fraught with hesitation, uncertainty and legal problems. As soon as the Denver Urban Renewal Authority moved to acquire property under its authority of eminent domain, it found itself immersed in legal action involving the constitutionality of the state urban renewal law. A year and a half later, the Colorado Supreme Court ruled that urban renewal authorities had the power of eminent domain and could acquire land at fair market vaiue and seil the cleared land for new private development projects.

The years since 1958 have seen increased urban renewal effort in Denver. This has included total clearance and redevelopment, clearance and rehabilitation and neighborhood conservation. Denver was the first city in the country to recognize the importance of preparing a citywide Community Renewal Program, establishing guidelines for future renewal and conservation activity. Planning funds made available by the federal Urban Renewal Administration are being used by the Authority to develop a comprehensive plan for the redevelopment of the South Platte River area, following the disastrous flood of June 16, 1965. This effort, using the skills of land planners, engineers, architects, industrial developers and land economists, has been established as the Mayor's South Platte River Development Study and will result in a significant number of programs to

create a totally new environment in more than 10 square miles of the city's area.

#### **Avondale Project**

Avondale occupies a magnificent site overlooking the downtown core area, and has a vista ranging from Pikes Peak to the south, along the Continental Divide to Long's Peak at the north. Major new development in this area includes middle-income private housing, a new 15-acre park, a six-acre neighborhood shopping center, a new elementary school, a union headquarters office building, a new church and a 12-unit and 25-unit townhouse apartment development.

Six high-rise apartment structures, the first of which is completed and occupied, will dominate the completed Avondale development. The first phase contains 164 apartments, ranging from \$90 to \$135 per month for one to three bedrooms, constructed under FHA's 221(d)(3) program. A group of two-story townhouse units provide 120 apartments priced from \$87 to \$110. This phase of construction, by Midwest Development Corporation of Cleveland and Van Schaack Company of Denver, amounts to \$2.5 million. Principal architect is Max Ratner of Cleveland. Charles Sink AIA of Denver is resident architect. The second phase of this development—five structures containing 292 high-rise apartments-involves an additional investment of \$3 million.

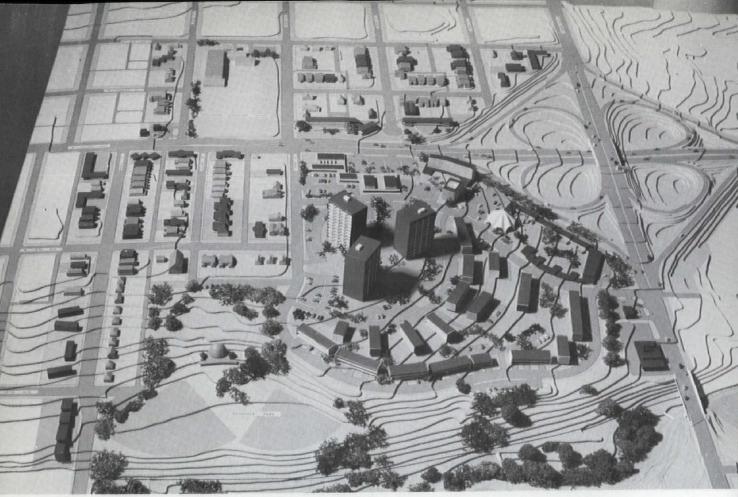
Henry Toll AIA, Denver architect has designed a project of 12 units of 221(d)(3) housing, providing two-bedroom units to rent for \$100 per month. Burns Construction Company, using designs by architect Miles Lantz, has constructed 25 units in its Town View Annex.

Land for residential development in the Avondale area has been sold on a fixed-price basis. The Denver Urban Renewal Authority has not attempted to squeeze the highest dollar out of the land. It has realized that in order to obtain good housing development, it is necessary to create an atmosphere which will encourage the developer to place emphasis on design and not force him to look upon cost as his primary concern.

When the Authority sold the six acres for the neighborhood shopping center, it offered it on a high-bid basis, but reserved the right to reject proposals if the design was unacceptable. This method of sale has resulted in a shopping center designed by architect Donald Roark AIA of Denver.

Recognizing that stabilization of a neighborhood is an integral part of the new development, the Authority has sold one of its prime sites in Avondale to the American Lutheran Church. Donald R. Schmaedecke, Denver architect, has

A professional engineer, Mr. Cameron is executive director of the Denver Urban Renewal Authority.



Avondale Village and its related development overlook downtown and has a spectacular mountain vista.

created a contemporary design for the first two phases of a three-part construction program for the denomination.

The urban renewal planner knows only too well what Bobby Burns meant when he mourned the outcome of the plans of mice and men. One of the major goals in Avondale was elimination of commercial blight along the main highway bisecting the project area-West Colfax Avenue. The cleared land was rezoned for residential uses. From the standpoint of good planning and development, the basic concept was fine. The only trouble with the whole idea was that no investor would build homes on the land. The Authority experienced mounting pressures to permit construction of a dairy store bedecked in blazing blue neon and twirling ice cream cone sign, and the yellow arches of a hamburger stand. A happy solution to the problem was reached by selling three of the sites to the local chapter of the Retail Clerks International Association for its new headquarters office. Architect Henry DeNicola AIA, Denver, has designed a story-and-a-half building on the largest site. Two smaller sites are being paved and landscaped to provide off-street parking for employees and visitors.

In addition to the Avondale neighborhood shopping center, five acres have been set aside for additional commercial development. Construction is now taking place on this site. Charles D. Strong, Denver architect, has designed a new office structure for a Denver builder-developer.

The successful development of the Avondale project has been the result of many factors, of which the site itself is perhaps most significant. The area, situated on the west bluff of the South Platte River, was chosen by builders in the 1880s as a prime site for residential development. As the area changed in economic and ethnic composition, residences fell into deterioration and many lots reverted to the city because of nonpayment of taxes. Taking advantage of the latter situation, the Authority cleared title and acquired nearly 15 acres of marginal land on the south edge of the project, which they dedicated to the city for a neighborhood park. Landscape architects and park technicians on the staff of the Denver Parks and Recreation Department have created an attractive park which will eventually expand into a major recreation development. The park is an example of what cities can do to change worthless gulch land into attractive and useful recreation areas.

Urban renewal planners, in cooperation with traffic engineers and public works officials, redesigned streets and eliminated the old grid pattern. These changes have made a more attractive development for the high-rise and townhouse units of Midwest-Van Schaack, and have enhanced the design of the neighborhood shopping center.

#### Blake Street Project

Like many growing American cities, Denver, through modern zoning regulations, has created many areas where residential development is in direct conflict with future industrial expansion. This was particularly true in the Blake Street urban renewal project in the north central part of the city. A 60-acre tract of industrially zoned land contained some of Denver's worst slum housing. In order to stimulate industrial developers to build in the area and to encourage existing industries to remain in the area, the Authority has rebuilt streets, curbs and gutters and new utilities. In one instance, the Authority moved a street to provide for better land assemblage and to eliminate the frontage of a residential area on the industrial sites.

The federal urban renewal law will not permit land donation by urban renewal authorities for park development in industrial areas. In spite of this shortsighted viewpoint, the Authority has made additional land available to the Department of Parks and Recreation for the enlargement and consolidation of the neighborhood park in the Blake Street project. Land has been made available to adjacent industries and commercial establishments within the project for parking, storage, new construction and future expansion. This has encouraged existing industries to remain in the area and traffic through the area has been improved through the acquisition of highway rightof-way. This was a cooperative effort whereby the Authority acquired land and the city and state highway department constructed the highway facilities through the project. Land was also acquired for the future expansion of major highway facilities in the area. The Blake Street project was not intended to be a glamorous industrial park development. The primary objective was to eliminate some of the worst slum housing in Denver. More than 105 families were removed from the squalor of a slum and relocated into decent housing by the Relocation Division of the Urban Renewal Authority. Ten acres of new industrial sites are being made available to existing industries in the area, as well as to new industrial uses. Urban renewal has created a new environment which is conducive to expansion by existing industries as well as to redevelopment by new ones. The construction of a new cross-town highway which will pass through the Blake Street area will serve to make the land acquired by the Authority most attractive to industrial developers.

#### Whittier Project

Renewal of neighborhoods through rehabilitation continues to perplex and frustrate urban renewal officials in cities across the nation—including Denver. The bulldozer method of clearance and redevelopment, although fraught with many problems, is in many ways far simpler than rehabilitation where structures are retained and owners are encouraged to remodel their homes. Denver's Whittier project was one of the first efforts to renew through home remodeling. Federal officials have said that unless American cities attempt major efforts in rehabilitation the objectives of urban renewal will fail.

Denver, like all major American cities, has large areas of housing which are blighted and in need of renovation, but where total clearance and redevelopment would be unwise from an economic standpoint and perhaps impossible politically. Although many cities have had successful home remodeling programs (notable examples include Little Rock, New Haven and Philadelphia), much of their success has stemmed from what might be better termed "restoration" rather than "rehabilitation." Restoration of fine old structures in the Society Hill area of Philadelphia and Georgetown area of Washington have been successful. These programs have resulted in an entirely new rental market, and more affluent families have returned to these center city areas. Denver's Whittier project is made up of approximately 100 acres containing 400 structures, and of families with average incomes of less than \$3,000. At the outset of the project, 3 percent of the structures were overoccupied. Because of poor physical condition or nonconforming use from the standpoint of zoning, 197 structures were acquired and removed by the Authority. In many instances the acquired land was divided and sold to adjacent property owners to provide greater open space and increased opportunities for improved landscaping. Where properties were sold to adjacent property owners, the purchaser had to agree to bring his residence up to proper standards.

School conditions were typical of older neighborhoods. The local elementary school was crowded on a block of land which was shared with slum housing. Playground facilities were completely inadequate. The Authority acquired an additional block and closed the street to permit adequate playground development for the elementary school. The Denver School Department constructed a new addition to the elementary school. This facility was designed by Langhart, McGuire, Hastings & Bangrover, Boulder architectural firm.

Although Manual High School, adjacent to the Whittier project, is one of the newest schools in Denver, its athletic field and play areas were inadequate. The Authority acquired a block of land, removed the residential structures, relocated families and sold the cleared land to the Denver School



Skyline project area outlined in white is shown in relation to downtown Denver.

Board for expansion of the high school athletic field. A small, one-block neighborhood section was totally inadequate for recreational use. This inadequacy was increased by the construction of a new Salvation Army Youth Center in the adjoining block. The Authority purchased an additional block of land, closed the street and dedicated the land to the city. This permitted the Denver Department of Parks and Recreation to more than double the size of the neighborhood park.

Major effort in the Whittier project concentrated on the rehabilitation of existing structures. A number of nonconforming zoning uses which had blighting effects on portions of the neighborhood were removed and sold for new development. A special staff of rehabilitation experts is head-quartered in a project field office. These staff people have worked with the residents and property owners in advising them on methods of remodeling their homes. In spite of average incomes of less than \$3,000, the 385 Whittier property owners in the area have spent more than \$1 million in the past four years bringing their homes up to standard.

Originally, it was hoped that extensive use of consulting architects could be employed in the Whittier project. However, the Authority has encountered certain limitations on architectural consultant services imposed by federal regulations. Although the Authority employed some consultant services in the early stages of the program, it was soon determined that the ability of the property owners to pay for major renovations was extremely limited. The Authority staff technicians have the major responsibility to encourage interior reconstruction, including mechanical and electrical installations. Attention to the exterior design and rehabilitation has taken second place to interior reconstruction aimed at protection of health and safety. The Authority staff is the first to admit that in future rehabilitation projects, this method of approach should receive careful evaluation before it is repeated. Critics of the Whittier project say there should be a happy medium between interior reconstruction and exterior improvement. It is obvious that if new development is to be encouraged in a project like Whittier, more effort must be made to change the exterior appearance of the homes.

Denver is centering a major urban renewal effort around the lower downtown area. The federal Urban Renewal Administration has approved \$141,273 for survey and planning for the Skyline Urban Renewal Project, which involves an estimated cost of \$42 million. Special legislation was enacted by the US Congress, in the form of an

amendment to the Housing and Urban Development Act, permitting Denver to claim as a non-cash grant-in-aid the proposed \$11.5 million convention center in the Skyline area. This special legislation permits Denver to finance its share of the urban renewal project—calculated on a one-third local, two-thirds federal basis—without any appropriation of funds.

The Skyline area was recommended as an urban renewal program by the Downtown Master Plan Committee. The committee is a group of Denver businessmen and civic leaders who contributed funds to finance the preparation of a "development guide" for downtown Denver. The committee worked with a special committee of the Colorado Chapter of The American Institute of Architects in developing land use concepts, with particular emphasis on public facilities.

The great resurgence of the downtown Denver area since World War II has been entirely the result of private effort. New office buildings, including I. M. Pei's Denver US National Center (Mile High Center) and the Hilton Hotel-May-D&F complex, have lifted Denver's downtown face. Prior to the war, Denver's downtown was distinguished by only two buildings of more than 16 stories in height. More recently, adjacent to the northeast corner of the proposed Skyline urban renewal project, Denver architect James Sudler & Associates have designed the striking new Federal Building and US Courthouse complex. At the other end of the proposed Skyline project, William Muchow AIA has designed the new \$11.5 million convention center. Mr. Muchow's design was chosen in an architectural competition, the rules

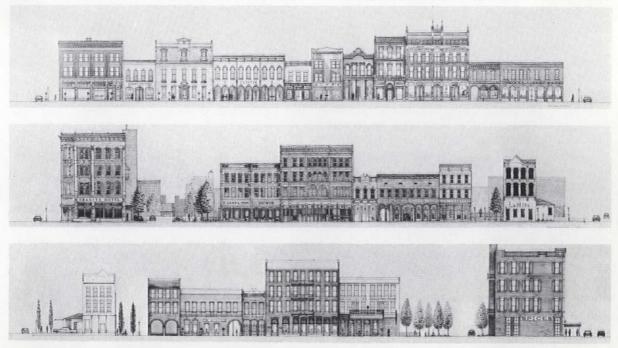
of which were prepared and recommended by the local chapter of the AIA at the request of Mayor Currigan. Also within the proposed Skyline project, the University of Colorado, using the services of architect-consultant I. M. Pei FAIA, is considering the expansion of its Denver Center complex. In the center of Skyline, the Park City Corporation is moving toward construction of a 42-story apartment house-commercial-motel complex designed by the already cited Ratner.

The Authority has completed the first phases of the Skyline plan including land-use studies, space occupancy and the first phase of its land-use and marketability studies. A major problem facing the successful development of the Skyline project is Denver's Larimer Street, the city's extensive "skid row." Relocation of the skid-row area poses a special problem. The Authority has completed a sociological study conducted by the Department of Behavioral Science of the University of Colorado. Based on these studies, decisions will be made concerning the skid-row relocation problem. Extensive engineering studies of soil conditions have been completed. Plans are being developed to determine the feasibility of closing some streets and their reconstruction along with utilities.

The Authority is approaching the point at which it will require the services of design consultants. In addition to development of new land use patterns, it is essential that the Authority have prepared design concepts to guide redevelopment of the area. Through good design, the Authority hopes to encourage new and exciting development within the area.

A significant private effort to restore some of

Larimer Square is a private historical restoration project now underway in the lower downtown area.



the original buildings in the lower downtown area is now underway by the Larimer Square Corporation. This is a private corporation, using the talents of Langdon Morris AIA, Denver, which has acquired buildings of 1870 vintage and is creating arcades and interior courtways to house craft shops, designer and architect offices, a coffeehouse and a "banjo joint" to entice Denverites and tourists into lower downtown.





Possible development of the South Platte River Valley.

Tied into the planned development of the Skyline project is a new cross-town highway connector along the north side of the project area. Preliminary plans indicate that this must be an elevated structure. Like most major American cities, persons concerned with the appearance of the city are extremely agitated over another elevated freeway. The Authority is hopeful that out of this will come a challenge to the architectural profession, to participate with highway engineers in the design of an esthetically-pleasing elevated highway.

Skyline will also include an effort to preserve buildings of historical or architectural significance.

Although the federal urban renewal laws and regulations permit special consideration for the preservation of historical sites and buildings of architectural significance, the challenge and responsibility of bringing about the preservation of such a building rests with the Authority, the citizens of Denver, and with the city's architects who should work to develop logical plans for proper use of the buildings which are preserved.

#### Platte River Development Study

On June 16, 1965 the city of Denver was hit by one of the worst disasters in its history. Fed by more than 14 inches of rain in less than six hours, the South Platte River rushed through the heart of the city, causing more than \$320 million in damage to the Denver metropolitan area. Recognizing that opportunity often accompanies disaster, the Urban Renewal Authority applied to the Housing and Home Finance Agency for an advance of funds to plan for redevelopment of the flood-devastated area. In less than a month, the federal Urban Renewal Administration had granted \$240,000 in planning funds and the Mayor's Platte River Development Study was instituted under the direction of Lee F. Johnson, a native of Denver, who is nationally recognized in the field of housing and urban development.

This effort is truly a "crash program" using all available resources and a technical staff from various city agencies. Out of the study will come significant recommendations for the redevelopment of nearly 10 square miles of the city's area. Numerous advisory committees have been established to assist the committee in its studies. Of particular significance is the recreation and beautification committee, which has a vital interest in making the Platte River an esthetically pleasing area. Immediately following the establishment of the Mayor's Development Study, the Colorado Chapter AIA offered to Mayor Currigan their services and those of national headquarters. Recognizing that the Mayor's efforts to prepare an overall development study offered an opportunity to recreate and redevelop vast areas of the city, local architects requested that the AIA send key people to Denver to advise the Mayor and work with Mr. Johnson and the local technical staff. Charles Blessing FAIA and Kenneth Brooks AIA, in company with Theodore Moore AIA, past president of the Colorado Chapter, John McGuire AIA, president of the chapter, and James Hunter FAIA, director from the Western Mountain Region, assisted the Mayor in establishing basic ground rules as to how the Platte River Development Study should be carried out. Architect Muchow serves as a full-time member of the Platte River Development Study team. A critique panel, composed of architects, planners, landscape architects and engineers, is being formed to advise the Mayor's study group on urban design concepts as they are developed.

Compared with those of other American cities, Denver's efforts in urban renewal may seem meager. The years ahead will witness the major development of the Skyline area. Hopefully, the Mayor's Platte River study will result in the renewal of large areas of the river valley through Denver. In all these efforts architects, both locally and nationally, will be asked to help Denver shape its future.

# Mile-High Course for the Mile-High City

BY JAMES D. BRAMAN JR.

Denver is matching its mountain backdrop with a comprehensive plan that is truly the "city's plan."



UNTIL THE TURN of the 20th century, Denver was basically a rough prairie city. Its only significant favorable attribute was a splendid backdrop of snow-capped peaks.

Although it was the largest city in the area, it had little to distinguish it in terms of park lands, cultural facilities, public places, outstanding structures or the other assets which transform a city from a conglomeration of basic urban activities into an advanced and refined expression of human civilization.

Yet a scant third of a century later, Denver was noted for its broad and beautiful parkways, one of America's most handsome civic centers, a useful and attractive flood control project along a creek which bisects the community, a vast mountain park reserve, a well-developed city park system, excellent educational and cultural facilities, and other hallmarks of emerging greatness. This metamorphosis was due in no small part to the efforts of lay and professional city planners of great vision and energy, combined with those of politicians of sufficient courage and imagination to carry out bold plans.

Unfortunately, as so frequently was the pattern in American cities, the Great Depression, followed by World War II, resulted in a period during which Denver rested on its laurels. Although the period was one of modest but healthy growth, it produced little which left an outstanding mark on the city. An era of more frenzied physical growth commenced in the mid-1950s, forcing Denver out of its self-satisfaction. Between 1950 and 1960, population of the City and County of Denver grew from 415,786 to 493,887, while the metropolitan area population skyrocketed to 929,383, a 51.8 percent increase in 10 years. The venerable Daniels and Fisher Tower, tallest building in the West when completed in 1911 and the only distinguishing feature of the downtown district for several decades, was overshadowed by more than a dozen major buildings in the decade commencing in 1955. Although the rate of growth has

slowed somewhat in the past two years, it is still substantial, and long-range prospects are that Denver will continue to be one of the major growth areas in the country.

Pressure of this unprecedented growth literally forced an active planning program upon the Denver metropolitan area. In this past decade, the Denver Planning Office has been revitalized and adequately staffed. The Inter-County Regional Planning Commission has become an effective voice over a five-county area centered about Denver. The three counties adjacent to Denver, and several of the more important cities therein, have adopted full-scale planning programs. True, plans may not always have been well conceived and, even more frequently, not well carried out. Also, rivalries between counties and cities within the area have interfered with the proper coordination of metropolitan planning and development. Nonetheless, planning in the Denver area is achieving a maturity and degree of acceptance which insures that it will have substantial impact on the form of the city in coming decades.

Much could be written about the Growth Guide for the Metropolitan Area prepared by the Inter-County Regional Planning Commission, or about comprehensive plans prepared or now in preparation by several counties and cities in the metropolitan area, or about the cooperative planning and action efforts resulting in such programs as the Denver Metropolitan Area Transportation Study and the Metropolitan Denver Sewage Disposal District. However, the author is most intimately familiar with the present program for major revision of Denver's comprehensive plan, and additional comments will focus on this effort.

Denver presently is operating under a comprehensive plan adopted early in 1958 and based on work completed in 1956 and 1957. It has never been formally amended since its adoption. Not surprisingly, this plan is badly out of date and is not now an adequate guide for zoning, capital improvements programming and other public activities of a dynamic city. For the past several years, the planning office has devoted a substantial share of its resources to complete re-

Mr. Braman is director of planning for the City and County of Denver.



Denver, center for an estimated I million residents.

vision of the comprehensive plan, and this work is being completed now.

The new Denver Comprehensive Plan, although in certain respects orthodox, strikes a new course in several ways. One of these is the much greater emphasis being placed on community objectives and developmental policies than in Denver's previous planning efforts, or contemporary plans in many other communities. The Denver Planning Office has recognized that it is impossible to develop an effective plan without first determining the type of city that Denver should become.

As a first step in this determination, many hundreds of citizens were involved in an effort to determine the present strengths and weaknesses of the community, action programs the citizens would like to see their government undertake, the image for which Denver should strive, and an analysis as to whether Denver was gaining or retrogressing in its efforts to become a great city. Citizens from all segments of the community were queried. The amount of time some citizens devoted to this effort was great, and on the whole they articulate. Following a surprisingly proved thorough review of this survey, a widely attended community conference, and detailed work by a Denver Planning Board Committee, the Board adopted a statement of community objectives for the city and county.

This statement included 30 broad objectives, and a series of priority action programs, but its general conclusion was that the single most important objective for Denver was to become, even more, a city with a superior living environment. This objective was deemed vital to the economic health of the city, as well as desirable from the standpoint of providing richer, more pleasant lives for its residents.

A superior living environment was deemed a prerequisite to economic health for several important reasons. Since Denver is located in the center of a region with a relatively small population, it has but limited potential as a heavy manufacturer of products to be consumed by the immediate market. Likewise, there are few major natural resources located close to the community.

However, Denver, with its adjacent mountains and plains, boasts an excellent climate and unsurpassed opportunities for recreation. If the man-made city, then, could match its natural environment, Denver would become one of America's most desirable cities in which to live. Economic activities requiring highly skilled, highly paid workers, such as national and regional corporate and association headquarters, research-oriented industry and manufacturers with products of high value and low bulk, would be attracted to Denver. Experience elsewhere has clearly demonstrated that highly skilled and educated workers (who are in short supply) prefer to live in a community where living conditions are excellent.

Consequently, the planning board has resolved that all public decisions in the fields of zoning, subdivision control, transportation, landmark preservation, control of water and air pollution, and provision of more adequate facilities for higher education, should be considered in light of their effect upon the living environment of the community. Insofar as possible, attainment of excellence must be the motivation behind all decisions on these and related matters.

The need for an excellent living environment also underlies decisions on physical growth expressed through the revised comprehensive plan. Perhaps its most important element, after the statement of community objectives, is a presentation of specific policies in terms of residential, industrial and business land use, public facilities and the transportation network. Unfortunately, these policies are too numerous to list here, but they will serve to guide many private and public decisions as the years pass.

Architects and other design-oriented professionals invariably express interest in the basic design concepts underlying Denver's new comprehensive plan. As a basic concept, Denver planners visualize the metropolitan area as developing in a star pattern. This pattern involves a strong metropolitan core of activity, with fingers of relatively high-density development radiating out along major transportation corridors, and with open spaces or low-density development occurring in the interstices between these transportation corridors. This pattern facilitates an efficient transportation system, encourages maintenance of a strong central area, and keeps open spaces or lowdensity areas relatively close to everyone. Ultimately, this pattern will become skewed in a north-south direction, because of limitations imposed by the mountains on the west and the Platte River drainage basin on the east.

Another basic design concept is that Denver, for at least the next several decades, will remain a city oriented toward low-density residential de-

velopment. This is the type of development preferred by people who are drawn to Denver from older and more congested cities. Although a number of new multiple residential developments are completed each year, the percentage of people living in such developments is not increasing in Denver as it is in many American areas. This low-density residential development is not necessarily synonymous with detached single-family dwelling units in close-in areas; it may consist of town-houses, rowhouses, residential clusters, and, perhaps, other housing types yet to be designed.

With a basic emphasis on low-density development, Denver will remain an automobile-oriented city. Recognizing a potential conflict between the heavy movement of automobiles and the need for a superior living environment, the Denver Planning Office is placing unusually heavy emphasis on the neighborhood concept of residential living, with traffic flowing in major corridors along the boundaries of residential neighborhoods rather than bisecting them. This will require construction of new freeways and improvement of major streets along the boundary lines of neighborhood and community units. The previously mentioned transportation policies will dictate that most freeways be depressed, that they be adequately landscaped, and that design of roadways and structures be handled in a sensitive manner

Although population density will not, in the near future, support a "successful" rapid transit system—the planning office definition of success in this field relates to the number of people carried by the system, not by the profit it realizes-more adequate transit will ultimately be required if the living environment is to be preserved. Concentration of high-density development along corridors, as envisioned by the star pattern, will make feasible the development of rapid transit routes in future years to supplement the basic freeway system. In the interim, the planning office recommends that all freeways be designed to accommodate major transit movements, by providing either bus lanes or median strips adequate to allow for future rail lines.

Another basic design concept is that all drainage ways should be treated as unifying civic assets, instead of something to turn one's back upon. Denver's climate is semi-arid, but the city is subject to high intensities of rainfall. Thus, many of the community's residential areas are now traversed by unsightly and dangerous gulches. In addition, the Platte River and several creeks pass through the city. With only two exceptions, the rivers and gulches are currently civic liabilities rather than assets. The comprehensive plan has developed realistic proposals for converting these areas into green belts, featuring a native type of

landscaping, which will add character and strength to the community and emphasize its tie to the mountains. The comprehensive plan contains other design elements of great significance to the community, including a parkway providing direct access from the airport to the heart of the downtown area, and terminating in the great federal office complex and the developing convention and cultural center. Also proposed are major extensions of the city's attractive but somewhat limited parkway system. A key element will be a sevenmile parkway originating at the geographic center of the city, following Cherry Creek, and terminating in a state park at Cherry Creek Reservoir, the region's largest public open space. Ultimately, this parkway will be unsurpassed in America in terms of utility and beauty.

In addition to these broad esthetic elements, more specific design considerations will be embodied in a detailed neighborhood planning program, to be begun this year. Planners also are at work on a series of new zones designed specifically to encourage sounder and more pleasing development along major arterial street frontages.

If the Denver Comprehensive Plan represents "ivory tower" thinking, it is a tower which even today is being built. A \$25 million bond issue approved by the voters in 1964 will result in many new public facilities, including the first important elements in a great convention and cultural center in downtown Denver. Legislation protecting mountain views from public points within Denver, and an ordinance to help preserve some of the historically and architecturally significant structures in the city, are under active consideration. Similarly, legislation for more rigorous sign controls is being reviewed. In this regard, it is interesting to note that for many years, long before federal or state legislation, Denver has prohibited new billboards within 660 feet of any freeway right-ofway within the city. The city's capital improvements program, although still inadequate, is in a much healthier situation than in previous years and is closely geared toward accomplishment of comprehensive plan proposals.

The entire effort of the planning office has been to develop a comprehensive plan which is not a planner's plan, but rather the city's plan, developed by and with full support of the Department of Public Works, the Department of Parks and Recreation, the City Council, the Mayor and, insofar as possible, the citizens themselves. Certainly Mayor Tom Currigan and many other public officials consistently have lent strong support to the comprehensive planning process.

Truly, Denver is setting a "mile-high" course. Can it do less than plan a city to match its three-mile-high mountain backdrop?

# Only Honeywell makes 8 different systems to automate any building

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#### 1-PNEUMATIC SUPERVISORY DATA CENTER



#### SYSTEM DESCRIPTION

Ideally suited to single buildings (small office buildings, schools, and institutions) with 10 or fewer mechanical systems. Provides graphic representation of mechanical systems from a central location . . . temperature indication and adjustment, starting and stopping equipment, and damper adjustment.

Since this is a pneumatic system, transmission runs are normally limited to 500 feet or less.

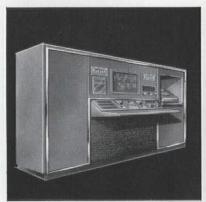
feet or less.

#### ADVANTAGES

Centralized operation yields great savings. Convenience of a central location saves time of operating people.

A low cost system because: 1) signals are transmitted pneumatically (transducers aren't needed) and 2) standard panels are used with customized display.

#### 5-SYSTEM 10-BUILDING CONTROL CENTER



#### SYSTEM DESCRIPTION

A means of centrally controlling and monitoring up to 100 remote mechanical systems with ten or more inputs per system. Solid-state scanner checks points at 60 per second; yet can locate any one of 1,000 remote alarm contacts in less than 2 seconds. Alarm printer provides perma-nent record of time, point address, and category of alarm.

#### ADVANTAGES

It's the most efficient, lowest cost "management-by-exception" system on the market today. Great reliability; high speed. Instant print-out of trouble points; un-

limited points.

Low wiring and installation costs due to time-shared wiring techniques.

#### 2-ELECTRIC SUPERVISORY DATA CENTER



#### SYSTEM DESCRIPTION

Generally applicable to single buildings Generally applicable to single buildings (schools, office buildings, institutions) with 10 or fewer mechanical systems. Makes possible centralized operation of an all electric or electronic temperature control system... or one that employs electric or electronic sensing with pneumatic actuation. Provides graphic representation... temperature, pressure or humidity indication either continuously or selectively with single high-precision indicator with ½% scale accuracy. Continuous pilot-light alarm indication.

#### ADVANTAGES

This system combines the instantaneous indication of alarms, ¼% scale accuracy with the ability to accommodate long transmission runs.

#### 3—SELECTOGRAPHIC DATA CENTER



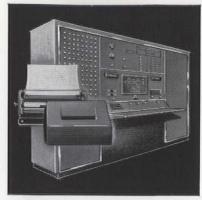
#### SYSTEM DESCRIPTION

Suited to large single buildings and multi-Suited to large single buildings and multi-building complexes (hospitals, industrial buildings, colleges and office buildings) where it's practical to carry signals by wires. Provides display and control of many mechanical systems in a desk-size console only 24" x 48" x 52". Signals are transmitted electronically.

An economical way to display and control many systems in a minimum space. Operation is simplified.
Installation costs are reduced dramati-

cally because a single set of controls can be used for all systems displayed. And, time-shared circuits mean that one set of wires is used to control a number of different systems.

#### 4-LOGGING AND SCANNING SYSTEM



#### SYSTEM DESCRIPTION

This is a low speed, automatic data collection system for use in buildings (office buildings, research centers, utilities, hospitals) where moderate amounts of data, and/or critical data are required. Scans 1 point per second up to 1,000 points. Prints sensing point information...value and type (such as degrees, gallons, etc.) . . . in groups according to a predetermined timing schedule. Off-normal conditions print in red.

This is the first step toward the automatically operated building. System provides simultaneous reading and collection of data; permits more efficient use of data. Also yields properly related data . . . critical readings taken simultaneously.

#### 6-SYSTEM 11-BUILDING SUPERVISORY CONTROL CENTER



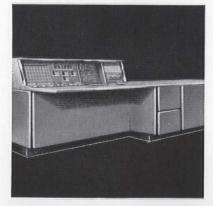
#### SYSTEM DESCRIPTION

This system also can centrally control and monitor up to 100 remote mechanical systems. It differs from System 10 in the following ways: it can scan temperature points and analyze them on a quantitative basis at the rate of 10 per second; it can print-out trouble-point information (where trouble occurred, when, and the value); alarm recording occurs on a change of status basis . . copy printed only when a point goes into alarm or rechange of status basis . . . copy printed only when a point goes into alarm or re-turns to normal.

#### ADVANTAGES

Solid-state reliability; high-speed opera-tion. All advantages of System 10 includ-ing time-sharing of circuits.

#### 7-SYSTEM 20-BUILDING **OPERATIONS CENTER**



#### SYSTEM DESCRIPTION

A high-speed, solid-state computerized data acquisition system that can handle up to 250 remote mechanical systems with 10 or more inputs per system. Unlimited points accommodated; scans 100 points per second on contacts . . . 40 points per second on quantitative values. Operations include: start-stop programming; flow and BTU measurement, computation, and totalization; change-of-state alarm recording. Two printers run at same time... one prints out alarms; the other prints out important operating data.

#### ADVANTAGES

Automatically starts and stops equipment according to a stored program; provides computation and action-taking capability.

#### 8-SYSTEM 30-BUILDING OPERATIONS COMPUTER CENTER

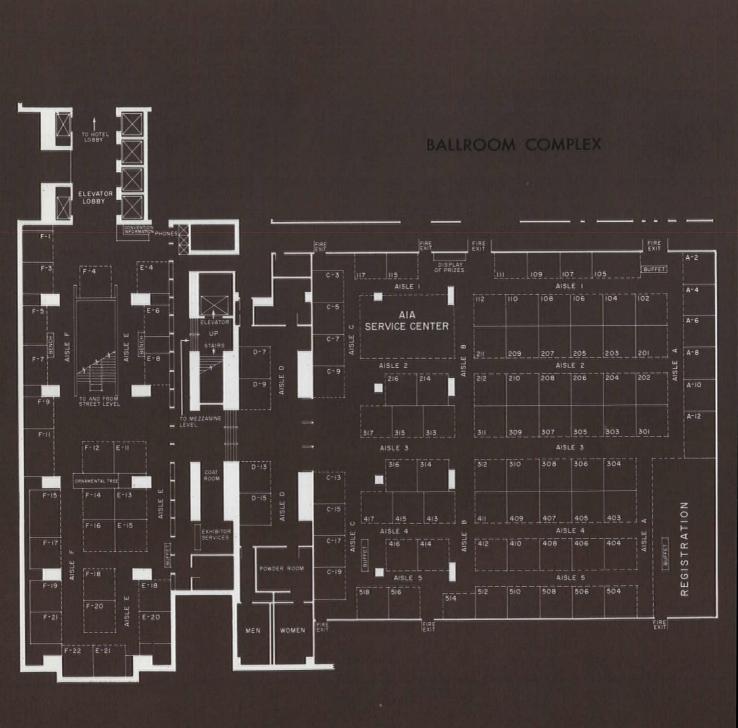


#### SYSTEM DESCRIPTION

System 30 can operate more than 250 system 30 can operate more than 250 remote mechanical systems with up to 20 inputs per system. It performs all the functions of System 20 (logging of selected inputs, start-stop programming, command functions, etc.). In addition, System 30 provides full, on-line control of airconditioning, heating and ventilating systems as well as central chillers, boilers, and utilities.

System 30 is the automatic building. It analyzes, makes a diagnosis, and takes corrective action. It runs the building. And, on-line control permits operation for minimum energy costs as well as monitoring machine efficiency for better maintenance scheduling.

# Previewing the Products at the Hilton



#### **EXHIBIT HOURS**

Sunday, June 26: 11 a.m.-4:30 p.m.; Monday, June 27: 8 a.m.-4:30 p.m.; Tuesday, June 28: 8 a.m.-5:30 p.m.; Wednesday, June 29: 10 a.m.-3 p.m. (invitational showing); Thursday, June 30: 8 a.m.-7 p.m. (closing cocktail party and grand prize drawings).

#### AllianceWall Corp. Division of Caloric Corp.

Booth: 309

Terra-Cal Earthen Tone colors and Dura-Cor, Dura-Rib formed porcelain panels. J. R. Salton, Bernard Harris, Lee Suhm, Marion Veasman.

# Aluminum Company of America Booth: 212

Sol-dec II solar screening and Alply panels, R. M. Sherwood, F. M. Ferry, C. R. Coppersmith.

# American Gas Association, Inc. Booth: 313

Data on total energy systems. W. J. Higginson, H. D. Nicholson.

# American Olean Tile Company Booth: 317

Ceramic tile featuring two highfashion colors: No. 377 Crystal Avocado for walls and floors; No. 77 Avocado (matte glaze) for walls. Robert E. Ryan, Kenneth E. Froberg, George W. Thorp.

# American Plywood Association Booth: 514

Specialty plywood sidings. Earl Pennington, Leigh Crandell, Tom Sias

#### American Saint Gobain Corporation

Booth: D-13

Flat glass products. C. M. Hall, J. J. Pembroke, M. D. Petersen, Victor Specht.

#### Andersen Corporation

Booth: 411

Perma-Shield windows. Richard D. Stevens, Howard L. Hanson, Roy Brown.

## Arketex Ceramic Corporation Booth: 301

Ceramic glazed structural tile. Ronald L. Bledsoe, Charles S. Erwin, James L. Wiley.

# Armstrong Cork Company Booths: E-11 & F-12

Sheet vinyl Corlon, vinyl tiles, perimeter bonding installation techniques. C. K. Edwards, Bert Johnson.

#### Art Metal, Inc.

Booths: A-6 & A-8

Contemporary office furniture and filing equipment. C. F. Henderson, J. L. Clarke, Carl Bachrach, Paul Schnitzen.

#### **Azrock Floor Products**

Booth: 417

Vinyl asbestos floor tile in new smooth or embossed patterns: Cortina, Florentine, Palatino, Modera and Roman Stone. Ralph Collister, Tom B. Grover.

#### Behlen Manufacturing Co.

Booth: 413

Stressed skin structural systems, Dubl-panel roof systems, curtainwall building systems. Wes Lusche, Fred Ingold.

#### Bell System

Booths: 208 & 210

Coin telephone equipment, cabling and use of data-processing devices by architects. R. E. Cornelia, C. W. Lewis, D. L. Russell, Jr.

## Bethlehem Steel Corporation Booth: 315

Coated sheet steel products including porcelain enameled and prepainted. J. T. Gearhart, R. J. Biggs, A. A. Hoffman, R. E. Simpson, R. P. Knight, E. J. Stuber, D. A. Recchio, J. C. Pope, J. B. Straubinger, L. T. Burtchby.

#### The Bilco Company

Booth: 111

Hinged steel doors for interiors. B. E. Farrell Jr., John M. Lyons.

#### Bradley Washfountain Co.

Booth: E-6

Group washing equipment. Thomas T. Brown.

#### Butler Manufacturing Co.

Booth: 303

Space grid system of architectural building components. R. W. Lee, Lynn Evans, D. H. Worden, D. Crispen.

# California Products Corporation Booth: F-16

Plexipave color finish system for tennis courts and play areas, and Reslite resilient asphalt for running tracks and other athletic areas. Robert J. Caldwell, Edward Renner, R. L. Hoover, Robert Quinn.

# The Philip Carey Mfg. Company Booths: 305 & 307

Waterproofing and dampproofing materials, coatings, color panels, roofing and siding, bathroom cabinets and grab bars, mirrors, reservoir liner. Bob Trauscht, John Potts, Bill Hanft, Gordon Hanson, Paul Japp, John Thomas.

#### Columbus Coated Fabrics Company Division of the Borden Chemical Company

Booth: F-19

Wall-Tex, Satinesque, Matchmaker vinyl wall coverings. Ted Binder.

## Commercial Carpet Corporation Booth: 410

Densylon nylon flooring for heavy-duty use in institutions, and Wool Six, a commercial wool carpeting. Oliver A. Wyman, James L. Saunders, Robert Stulz, Marvin Tate.

#### Crane Company

Booth: F-21

Plumbing, heating and airconditioning products. R. F. Caldrone.

#### Curtis-Electro Lighting, Inc.

Booth: 409

Fluorescent and incandescent lighting fixtures. Jerry Litner, Irv Wescott, Bob Mugridge.

#### Day-Brite Lighting Division of Emerson Electric Booth: C-13

Commercial fluorescent fixtures, surface and recess mounted. Ray Imre, Phil Smith, Pete Johnson.

# Devoe Paint Division Celanese Coatings Company

Booths: 506 & 508

Paints and protective coatings for residential, institutional and commercial surfaces. E. H. Grant, Jack McDermott, W. C. Dabney, Lee Roads, J. M. Brodsky.

#### Dur-O-Wal

Booth: 107

Masonry wall reinforcement with

truss design, adjustable wall ties, rapid control joint, continuous rectangular ties. Larry Becker, Wil Brynjolfsson, Gale Johnson, Ed Ryan, Larry Stanley, Glen Stoen, Phil Van Strander.

#### **Dwyer Products Corporation** Booths: 202 & 204

Restyled compact kitchen line for 1966. Richard Van Vlack, David Nelson, James Cato.

#### **Edison Electric Institute**

Booth: C-17

All-electric concept in commercial and institutional buildings. J. Dudley Waldner.

#### Electric Heating Association, Inc. Booths: 115 & 117

Space-conditioning concepts, heat recovery systems and in-space systems. W. G. McGarry, W. F. Boyle.

#### Elkay Manufacturing Company Booth: 310

Stainless steel products and sinks for home and institutional use. Carl Roath, Don Biggs, Richard Swain, Earl Collins.

#### Floating Floors, Inc.

Booths: 112 & 211

Floors with site environment systems in computer rooms, hospitals, banks, telephone exchanges, government buildings. Robert Pulis, John Slamin, John Daly, George Mancuso.

#### Follansbee Steel Corporation Booth: 311

Terne roofing and weathersealing products. T. J. Boyd, F. C. Laubenheimer, S. S. Epstein, O. Y. Kinnard.

#### General Electric Silicone Products Department Booth: C-3

Silicone construction sealant and silicone traffic topping. F. J. Tylenda, J. R. Brower, R. A. Mills, J. Van Detta.

#### Georgia-Pacific Corporation

Booths: 106 & 108

Architectural factory-finished hardwood wall panelings and rough sawn sidings including redwood. E. L. Kimball, G. S. Nelson, Chas. Funkhouser, R. L. Dunham.

#### Gladwin Plastics, Inc.

Booth A-12

Public telephone enclosures featuring space phone. Edmund W. Dugan, J. J. McHugh, H. D. Wood, R. H. Gray, N. L. Carlson.

#### Gotham Educational Equipment Company, Inc.

Booth: C-19

Natural cork flooring in 16 solid colors, 8 bi-colors and 8 multicolors. M. L. Miller, David I. Dougan, Charles L. Binna, G. H. Martens.

#### E. F. Hauserman Company

Booth: 504

Movable wall systems. C. T. Egli, F. Wehle, Jr., R. Hill, C. Munoz-Flores.

#### Haws Drinking Faucet Company Booth: 304

Cast aluminum and concrete outdoor drinking fountains. C. M. Dillon, T. R. Haws.

#### Hillyard Chemical Company Booth: 312

Floor treatment and building maintenance products. William E. Hillyard, John C. Reick.

#### Holcomb & Hoke Mfg. Co., Inc. Booths: 102 & 104

New FolDoor folding walls and partitions designed for interior space flexibility. L. J. Ferguson, Edward J. Wolf, Jr., G. T. Carlino.

#### Homasote Company

Booths: 516 & 518

Roof decking, floor decking, new vinyl-coated Homasote and Poly-Panel. E. A. Whalen, P. Petrino.

#### Indiana Limestone Company, Inc. Booth: E-15

Cut limestone, precast concrete, preset limestone. Mark Doty, Gary Gaiser, William Austin, Edward Rechel, Robert Furlong.

#### **Inland Steel Products Company** Booth: E-21

Modular systems of structural and ceiling components. R. A. Burr, C. H. Mahn, R. F. Lorenz.

#### Johns-Manville

Booths: F-18 & F-20

Built-up roofing, shingles, insulation, acoustical and decorative ceiling panels, Colorlith products. J. E. Kindregan, E. M. Fuller, R. H. Eckert.

#### Jones & Laughlin Steel Corporation Stainless and Strip Division

Booth: F-3

New stainless steel school entrance with underwriter's label (fire rated). Frank F. Goosmann, Arthur Blackman, George Rosborough.

#### Kaiser Aluminum & Chemical Sales, Inc.

Booth: 404

Kalcolor aluminum and architec-

tural aluminum products in lightfast, integral-color anodized finishes. F. A. Loebach, J. J. Larkin, C. E. Gunnels, T. D. Canakes, A. M. Mohrmann.

#### Kentile Floors, Inc.

Booth: F-4

Resilient tile flooring in solid vinyl, crystalite vinyl, vinyl asbestos, rubber, cork and asphalt. R. Koob, L. Brekke, C. Christenson, J. Clegg.

#### Kinney Architectural Glass

Booth: F-14

Solar heat and glare-reflecting glass, Duovue transparent mirrors. P. D. Reifenrath, W. R. Stern, F. J. Kirk, E. W. Bleecker.

#### Knoll Associates, Inc.

Booths: A-2 & A-4

Furniture and fabric designs. Paul Copeland, John Helm, Tom Nevins, Barry Rosengrant.

#### Koppers Company, Inc.

Booths: 405 & 407

Environmental control of sound and cleanliness, clean rooms and sound traps. Earl F. Bennett, Joseph J. Steskal, Thomas R. Shine, S. H. Fedan.

#### Lake Shore Markers, Inc.

Booth: E-8

New Letter-Lites, lifetime aluminum letters, plaques, signs, emblems. Walter G. Forsyth.

#### Lamont & Riley, Inc.

Booth: 306

Expansion joint cover with metal edges on flexible insulated Neoprene bellows. H. Blair Lamont, Jr., Chapin Riley, Frank J. Patry.

#### Lead Industries Association, Inc. Booths: 414 & 416

Soundproof movable walls, sheet lead plenum barrier, lead and leadcoated roofing and flashing materials, leaded porcelain enameled curtain-wall panels. Edwin D. Martin AIA, John M. McAward, Jerome F. Smith, Bruce Fader.

#### Libbey-Owens-Ford Glass Company

Booths: C-7 & C-9

Parallel-O-Bronze and Parallel-O-Grey plate glass, thermopane with GlasSeal edge. R. J. Grafton, R. B. Hudspeth, G. T. Dunn, Jr., A. L. Matthews, Jr., P. R. Orser, R. D. Jones, W. H. Kuhns.

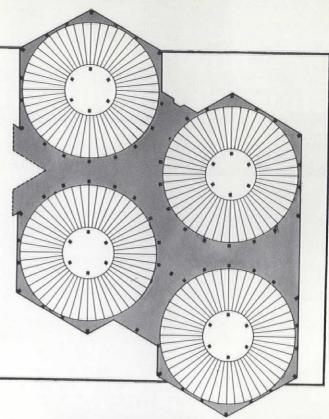
#### 3M Company

Booth: 406

Image drafting system utilizing portable translucency to produce completed drawings or paste-ups.

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Dobyns-Bennett High School, Kingsport, Tennessee • Associated Architects: William Hamilton Wallace, AIA and J. Larry Poole, AIA, Kingsport • Consulting Engineer: H. T. Spoden, Kingsport • Contractor: Cassel Bros., Inc., Kingsport • Fabricator: Bristol Prestressed Concrete Company, Bristol and Johnson City, Tennessee.

# how modular systems can work for you when you must design for interior flexibility

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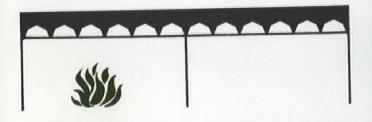
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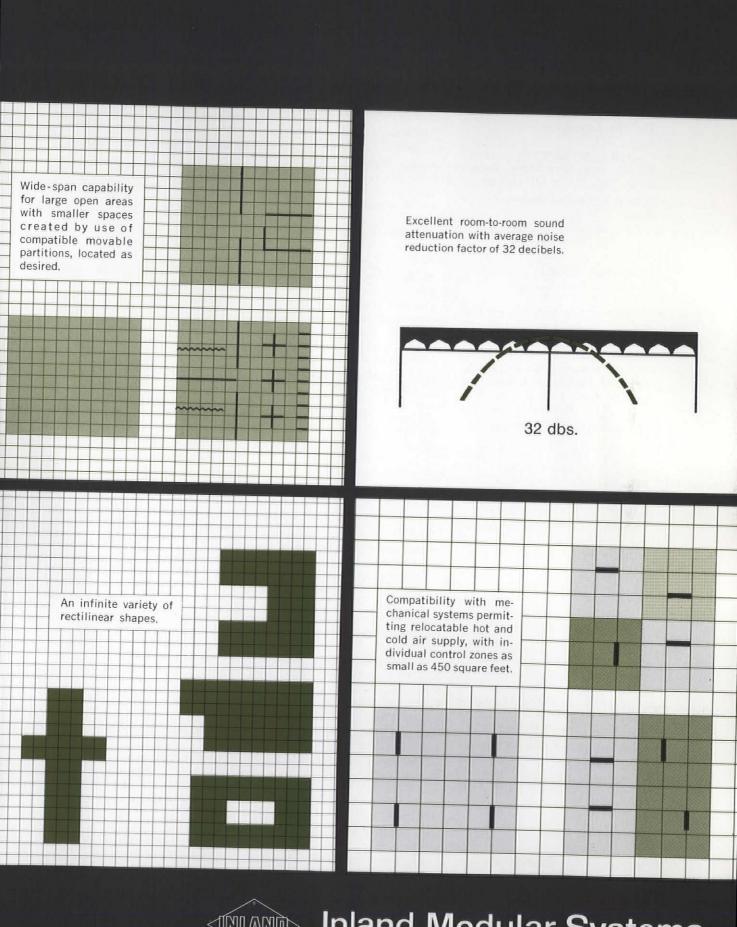
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intermediate level changes.



Kevin Curry, Barney Poole, Jim Warhnack.

#### W. R. Meadows, Inc.

Booth: 412

Products engineered for control of soil-based moisture migrations, gaseous and liquid. John J. Sullivan, Donald Maison.

#### The Miller Company

Booth: 403

Concept providing high-quality, low-cost room illumination. Robert L. Kirshner, Edward D. Heintze.

#### Miracle Equipment Company

Booth: F-22

Pressure-molded fiberglass stadium seats. Don Hayward, John Allen.

#### Modernfold Division New Castle Products, Inc.

Booths: 214 & 216

Coil-Wal side-coiling wood partitions for subdividing auditoriums and gymnasiums, Acousti-Seal 51 flat-panel operable walls for sound control in meeting rooms, conference and classrooms. J. Lovegren, G. T. McCann, G. R. Jensen, D. F. Foster, W. R. Heck, J. J. Worrall.

#### Molded Fiber Glass Company

Booth: 308

Molded fiber glass concrete forms. Wm. Spurr, Larry Smith, Roy Warren.

#### Mo-Sai Institute, Inc.

Booth: E-4

Precast concrete with exposed aggregate curtain walls, window walls, structural units. Dave Harter, Charles Wilson, Pat Harter.

#### The Mosaic Tile Company

Booth: 209

Glazed and unglazed ceramic mosaic tile, Byzantile II. R. J. Hughes.

#### National Electrical Contractors Association

Booth: F-1

Total electric energy in commercial, industrial or institutional buildings. Bernard H. Trimble.

#### National Steel Products Company Booth: E-18

Stainless steel grab bars and handrails. Alfred B. Cerf, Hertha Constant.

#### Navan, Inc.

Booths: F-15 & F-17

WonderFall Animation, liquid technique without water, for fountains and custom designs inside major buildings. Paul Bert, Bruce E. Hoffine, Scotty Maxwell.

#### Nessen Lamps Inc.

Booth: 206

Portable table, floor and wall lamps for commercial or residential interiors. Marcelle L. Wolf, Stanley Wolf, William T. Weber, C. J. Welch.

#### Pittsburgh Paints

Booth: E-13

Pitt-Glaze, polyester-epoxy coatings. Morris T. Johnson.

#### Pittsburgh Plate Glass Company Booths: 314 & 316

Solarban decorative glass, Herculite K environmental glass, T-Wall and float glass. E. A. Lundberg, Robert Banks, Stephen Troeger, Roger Holmes, Howard Walker.

#### S. H. Pomeroy Company

Booth: E-20

Lite-Lift vertical and horizontal sliding hardware for chalkboards, tackboards, wardrobe enclosures and pass windows. H. James Gill, Jr., Joseph T. Perkins.

#### Red Cedar Shingle & Handsplit Shake Bureau

Booth: D-15

Textured "fancy-butt" shingles plus handsplit and machine-processed shakes. Virgil Peterson, Glen W. Simon, Hugh Loth, W. S. Brown, Marshall Ritchie.

#### Rohm and Haas Company

Booths: D-7 & D-9

Plexiglas acrylic plastic sheet. John DeVries.

#### Sargent and Company

Booth: C-5

Complete line of architectural hardware featuring maximum security system. W. L. Elmblad, R. G. Salaman.

#### Schokbeton Products Corp.

Booth: 207

Architectural precast concrete, Insul-Con wall panels, Sectra industrialized building system. A. C. Geelhoed, George J. Santry, Edward C. Stevenson, Grant Marsh.

#### Simmons Company

Booths: F-9 & F-11

Engineered sleeping and storage system for dormitories including wall beds, sofa beds and chairs. C. E. Parks, R. L. Deuchler, W. I. Thurman, J. P. Brennan.

#### The Standard Products Company Booth: 415

neoprene structural Stanlock gaskets and Stanpro one-part urethane sealants. Stephen I. Hall, Arthur Hubbard, Dr. R. B. Greene.

#### Stanley Hardware Division of the Stanley Works

Booth: C-15

Contract and cabinet hardware. Jack E. Keown.

#### Stark Ceramics, Inc.

Booth: A-10

Structural glazed facing tile, Starkustic acoustical tile and lightweight Super-Tile. W. H. Williams.

#### Structural Clay Products Institute Booth: 105

Demonstrator models of load bearing brick walls. Ronald S. Ryner, Clay Ridgway AIA, Donald Wakefield, Robert Lyons, Roland Proett.

#### Surface Engineering Company, Inc. Booth: 109

Secoton elastic vinyl membrane coating, Perma-skin vinyl coating, Rhino-klad epoxy coating, Seco tile vitreous and Seco elastomeric coatings for interior and exterior surface finishes. Robert E. Waldrop, Joseph M. Morgan.

#### Thonet Industries, Inc.

Booths: 203 & 205

Dormitory and lounge furniture, dining chairs and tables. G. E. Baumgartner, R. F. Lewis, John P. Beals, Donald Hamilton.

#### The Troy Sunshade Company Division of The Hobart Manufacturing Company

Booths: F-5 & F-7

College dormitory furniture and summer casual furniture. Paul C. Buchanan, Peter B. Borre.

#### Universal-Rundle Corporation

Booth: 201

New meteor fiberglass Uni-bath and highlight color lavatories. R. R. Sieger, E. S. Harber.

#### Wells Television, Inc.

Booth: 408

Coordinated hospital communications, complete service including design, installation and maintenance. Harry Scher, Roland N. Iverson.

#### Weyerhaeuser Company Booths: 510 & 512

Architectural wood products and services. J. E. Burks III, O. J. Barr, F. H. Smith.

#### Yale Lock & Hardware Division Booth: 110

Residential, cylindrical, mortise locksets, door closers, auxiliary locks and builders' finishing hardware. Richard F. Cunningham, William McGreevy, Charles Charter, Edward Griffin.



# What's happening outside?

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# where the action is

THE FAME OF Colorado rests on three things: climate, scenery and outdoor life. In these, the area excels and the visitor pursuing any or all three will not be disappointed.

The Denver Post recently carried a story about a hometown man riding one of those Swiss sightseeing trains through the Alps and remarking, "It reminds me of home." Gasped the passenger next to him: "My God, man, where do you live?"

And Holiday magazine once described Denver as having "more culture per square head than any other city in the United States." This was obviously intended as a measure of the scarcity of square heads in the town.

An isolated city, Denver's principal industry, aside from tourism, is serving as supply center to a five-state ranching and mining area. It does not offer the wealth of shopping, theater and similar urban indoor sports found in some metropolitan areas.

Denver is a slow-paced, relaxed place where people actually stroll even when they're going somewhere; we can always spot a New Yorker by the way he zooms down the street, leaving his companions blocks behind. Nobody (much) is very efficient, and nothing ever gets done on time (not only in construction as in the rest of the world but in everything else) but everybody is polite and apologetic when you complain.

Rather than being concentrated in one area, the interesting things to do and places to go are found all over town and in surrounding counties. For this reason, the Colorado Chapter AIA Auxiliary prepared a guide to Denver—a detailed, pocket-sized directory of everything we could think of—which will be available to convention-goers. We listed most places of interest and concentrated on the three areas that have the most to offer.

#### downtown

Downtown Denver is within walking distance of the Hilton. Some shopping is available, naturally, but aside from the Denver Dry, the May Co. (good comprehensive department stores), Montaldos (fine women's clothing,

branch of Doops), Kohlberg's (the best Indian and western souvenirs, expensive but cheaper than a trip to the Reservation), and some good men's stores and book shops, the best shopping is elsewhere. What we do have downtown is some good sightseeing.

Denver's tallest structure, the Security Life Building at 16th Street and Glenarm (a short walk from the Hilton), has an observation deck at the 31st story which is open 10 a.m. to 5 p.m. seven days a week. The Top of the Rockies Restaurant is reached by a glass-enclosed outside elevator, one of only three in the United States. Quite an experience!

The 28-story First National Bank Building, 17th Street and Welton, also has an observation sky deck, hours 10 a.m. to 10 p.m. weekdays, 9 a.m. to 10 p.m. on weekends.



Holiday also said, "Denverites are very fond of their view, and if the mountains were taken away they would miss them very much—when they noticed it." The Front Range, one of the many which comprise the Rocky Mountains, can be seen in its entirety from Long's Peak on the north to Pike's Peak to the south, with Mt. Evans crowning the central portion directly west of Denver.

With differing weather conditions and time of day, the "changing panorama" is endlessly interesting. Don't fail to see a Denver sunset; you may be surprised to discover that those calendar-type Charles Russell sunsets were not figments of his imagination. At times they look more like a Japanese watercolor.

Our State Capitol building at Colfax and Sherman is a copy of the US Capitol. That's real gold leaf from Colorado mines on its dome—\$23,000 worth. The 13th step on the west side is marked by a plaque exactly one mile above sea level. It's a good place to take school-age

children: guided tours all day long and you can climb stairs to the top of the dome, another scenic vantage point.

The US Mint at West Colfax and Cherokee stores \$2.5 billion in gold bullion and is the largest depository except for Fort Knox. It too is a good place to take children, and tours are held five days a week.

#### larimer

The second important retail center is Larimer Square, where shopping really began in Denver more than 100 years ago, It's a must. The oldest block of masonry buildings in Denver and heart of the original city, it sank to Skid Rowdom, but one year ago a group of citizens bought up the whole block and undertook its architectural rejuvenation. Your husbands can tell you about that.

Our interest here is the shops, which are among the most charming and treasure-filled in town: The Gondola Boutique has an international collection of original fashions and gifts, and Poor Richards is a custom leather shop featuring handbags, belts, sandals, jackets and all kinds of clothing. They will take your orders, help work out your designs and you can watch the work in progress.



The Blue Bottle Tree features stained glass, enameled copper, ceramics and sculpture. At Gusterman Silversmith, handcrafted jewelry is the thing.

A lovely place for a stroll, Larimer Square is a myriad of lanes and courtyards, little places for dining and an architectural surprise around every corner. Here you'll find Laffite's, Denver's best and poshiest



seafood place; Gay Nineties decor, lots of atmosphere; and service and wines to match the food which is good, good, good. Even New Englanders say the clam chowder is tops; try pancakes Mary Louise.

In a lighter vein, across the street is Your Father's Moustache, the swingin'est place in town with its ragtime-type banjo band that really rocks six nights a week; Dixieland on Sundays from 4 to 8 p.m. It is guaranteed to set your foot tapping (the structural engineer on the remodeling almost fainted when he walked in); also sing-along-if you can't carry a tune, don't worry, nobody can hear you anyway. There is beer and such and a menu that lists "whiskey 80¢, good whiskey 95¢." Charming decor, straw hats, striped vests, the whole bit. Larimer Square is 10 blocks from

Larimer Square is 10 blocks from the Hilton, at the other end of the downtown—a nice walk if the altitude doesn't get you.

The third area is Cherry Creek Shopping Center and Cherry Creek North, a \$2 taxi ride from the Hilton, or drive east on Speer Boulevard, cross University, and there you are—10 minutes. Cherry Creek Shopping Center is large and comprehensive; the outstanding shop is the Gold Key which has exceptionally attractive gifts, bric-a-brac, china, a bath shop and a paper shop; nothing you couldn't find in any city, but the best of it.

Cherry Creek North is the quaint section next to the shopping center, or more precisely, north and east of Sears Roebuck on 2nd and 3rd Avenues and the cross streets from Josephine to St. Paul. Here, little houses have been turned into shops and galleries. Third Avenue is our Rag Row, and a walk going east from University will afford hours of browsing for furniture, clothing, gifts, oddments of every description (details in our directory).

For lunch, go to Hummel's Delicatessen at the east end of the shopping center around the corner from Walgreen's. You can munch outside in a sidewalk cafe overlooking a sea of automobiles, but the food makes up for that. They're mobbed at lunch, so go early or late. For a fancier lunch, try Neusteter's Cafe, a sort of low-altitude sky room; the view isn't much, but food, service and atmosphere are excellent.

After your days of shopping on the banks of Cherry Creek, you will want to try the Camelot for dinner. A real gourmet restaurant and one of Denver's best, it has lovely decor in the inside dining room, the Blue Bar (very intimate) and the Garden Room. The latter is a fake, since it is indoors, but it's charming with its real grass (don't ask me how they grow it indoors; we can hardly get it to grow outdoors), and entertainment later on. The service is good, the lobster curry a triumph!

Now, to crown your day you must not miss Bill McHale's Broadway Revue at Pilk's Flaming Pit. This is a restaurant where you won't want to eat, but the show is absolutely top quality; it's a few blocks from the Camelot, and be sure you have a reservation for show time.

There are myriads of tiny specialty shops elsewhere in Denver with whole inventories of nothing but candles or artificial flowers or leather goods or unusual clothes. The shopping is particularly good for sportswear, both active and spectator, from conservative Bermuda shorts to the most far-out Mersey Beat outfits. Mexican imports are also in good supply and high-style clothing is available in a few places although most Denver stores stick to conservative styles.

There is one shop (Merry Simmons) that specializes in high-style clothing for little girls, and one that is devoted to way-out shoes (Pappagallo). Craftsmen can be seen at their workbenches in several shops in Larimer Square. Their wares can be purchased or special things ordered (Gusterman Silversmiths, Blue Bottle Tree). Western wear and saddlery are a Denver specialty. There are a number of food shops well supplied with delicacies and calories, one devoted to cheese (Rudisill's).

Art galleries are in good supply, a number specializing in original local work at reasonable prices. We'll tell you about all these and other places in detail in our directory.

Although Denver is not exactly a gastronomical wonderland, there are plenty of good places to eat, a fair share of gourmet restaurants and some really swinging night spots. (It will be soft shell crab time at the Brown Palace, for the benefit of landlocked saltwater devotees). For lovers of Mexican food, Denver is buenissimo!

Special places not to be missed include Bent's Fort, a famous fur trading center. This is a replica with authentic decor of the time and with relaxed atmosphere, where young ones can wander around outside and visit with a real bear, or explore a gift shop and tiny museum.

For a birthday, children can fire a real cannon which, though small, makes a very satisfactory boom. There are drinks and the food is unusual but, for your assurance, they have the ubiquitous hamburger for the kids. If you've always wanted to try a Rocky Mountain oyster, here's your chance; also buffalo steak, Kit Carson's Mother's stew and Mexican specialties.



The Buckhorn is an old, old Denver spot down by the railroad track, a favorite hangout of newspaper people. The food is simple, hearty, good; sandwiches at lunch, steaks for dinner. The decor is simply unbelievable, an accumulation of stuffed animals and other relics of Denver's antiquity. The atmosphere is so genuinely old-time you are sure "you are there."

The Saint's Tropics is the kind of place where the entertainment is usually described as "torrid" and "exotic"; to put it nakedly, it's a strip joint, but classier than most with loads of sumptuous decor, built-in waterfalls, etc.

The Brown Palace is world famous; the beautiful rotunda lobby retains its old graciousness even with bits and pieces of remodeling bespeaking the various eras in which the work was done, and T. J. Moore AIA can tell you how it feels to scale the various balconies on a bedsheet ladder. The various restaurants in the Brown unquestionably deserve their reputation as among the world's greatest.

The Palace Arms is the quintessence of elegance in every respect—service, food, and decor are unsurpassed, prices commensurate. The Ship Tavern is Brown Palace quality in a gayer, livelier atmosphere, a more limited menu, more reasonable prices; one of the world's great bars—the place in Denver for lunch. Incidentally, the Brown is just a few blocks from the Hilton.

Elitch's Gardens is a charmingly seedy mish-mash of floral displays, neon lights, side show barkers and Broadway plays; a remnant of the Old West on the brink of civilization; gentility side by side with honkytonk culture. This is where Mamie Eisenhower spent her Sunday afternoons as a young girl.

Elitch's has given a variety of entertainment to generations of Denverites and now offers a full-scale amusement park with a most glorious old merry-go-round, lots of roller-coasters, and all kinds of rides, games, and funhouses; special children's amusement park for the tiny ones, with suitably scaled rides and the darlingest boat ride through a tiny park full of birds and rabbits.

The Trocadero Ballroom, one of the last strongholds of the big bands, is a huge semi-outdoors space in full swing Friday and Saturday nights, and has a spectators' gallery and two adjoining lounges, one with cocktails and one with soft drinks. Elitch Theater is a repertory theater featuring Broadway stars; many famous actors, including Grace Kelly, started here. The Orchard Cafe offers good, simple food in an atmosphere that is a bit down-at-the-heels Old World.

This collection of kitsch is unified by the vast and meticulously tended gardens which meander everywhere in almost tropical profusion. For lovers of flora on a more orderly scale, the Denver Botanic Gardens, have acres of, growing things outside and tropical and semitropical plants in their gorgeous new Conservatory Building, which of itself will be of interest to architects.

## traveling

With a car and the aid of a map, getting around Denver is no problem at all; distances are short and parking is easy, except for downtown which is right at your door anyway. Some of Denver's little traffic innovations may be a bit unnerving, such as traffic lights in the middle of the block nowhere near an intersection.

These oddities are the result of Henry Barnes having cut his teeth as Denver's traffic commissioner, and ever since then, our traffic engineers, without inhibition, have been inventing signs and things you never saw before. Try to keep your wits about you though—our traffic cops are polite but *very* firm; exceeding the limits can mean a little trip right down to the station.

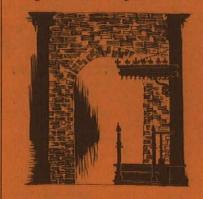
Denver's suburbs are even more strict and full of speed traps; a Denver architect was fined \$20 on the spot for a little mistake going out of the Cherry Hills Town Hall parking lot! If you don't have a car handy, cabs are the answer—public transportation is practically useless. For most places you have to telephone for cabs and they take 10 or 15 minutes to arrive, so plan ahead.

The weather, for which Colorado is also famous, is supposed to be warm in the daytime (70s), cool at night, dropping rapidly at sundown. Our normal June-July days are embellished with a brilliant sun in a cloudless sky, often clouding over in the afternoon to deliver a short refreshing sprinkle of rain. If anything "unusual" happens, it is likely to be more rain. The humidity is very low, 10 percent being normal;

thus, one is comfortable at all temperatures,

Clothing in Denver can be very casual in the daytime; resort wear every place, cotton suits downtown. You never see black or dark colors in the daytime. Sunhats are an absolute necessity since our blazing sun can burn as fast as Bermuda's, and if you plan to outdoors it, have plenty of suntan lotion. Longsleeved light cotton dresses or blouses are a good idea since they keep one's arms from getting shades darker (or redder) than everything else; this can happen even in a car. Shorts go everywhere except downtown.

In the evenings we suddenly become a city and you'll wear black dresses or cocktail dresses—oh we glitter at night! For evenings at Central City or anywhere away from downtown, resorty-type dresses, light colors and prints are seen most. Now hear this! Wherever you go after sundown, you will need a wrap, and usually something warmer than a light sweater; small furs are seen all summer in town. A medium weight wrap is essential, especially since Denver is big on eating outdoors at night.



Every place in Colorado is always cooler than Denver with the exception of Pueblo, but you're not very likely to go there. The higher you go, the cooler it gets, and you get pretty high pretty quickly if you head for the hills. Except for Colorado Springs and Aspen, every place is less dressy than Denver.

The aforementioned two are sophisticated resorts: The Springs is a conservative resort; Aspen is wayout, fashionwise and otherwise, with anything going and the weirder the better. Aside from Denver and Colorado Springs, this is blue-jean country and dresses are simply not seen in the daytime. Dude ranches, no matter how dudish, call for blue-jeans night and day, or whatever you feel comfortable in when everyone else is in jeans.

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Nights in the mountains get really cold and wool slacks or ski pants with warm sweaters are necessary for the proliferous cook-outs. In Aspen wear fancy pants with fancy sweaters; elsewhere, practical things will cause fewer raised eyebrows among the genuine cowboys you will see.

#### altitude

The altitude sometimes causes one to feel drowsy the first few days and short of breath upon exertion. This becomes more noticeable the higher you go, and Colorado Springs and most places in the mountains are higher than Denver. so siestas are very much in order. The altitude also causes this to be a very economical place to vacation since you can get twice as smashed on half the booze. Gin seems to be the worst offender, so watch those martinis. (The hangover here is the same as anyplace else, so don't say we didn't warn you.)

#### colorado

We can't begin to list all the things to see and do in Colorado. Sufficeth to say: Denver is in the center of the state; there are excellent roads leading elsewhere-you can be deep in the mountains 30 minutes from downtown Denver.

For those who don't plan to bring or rent cars, there are bus and rail tours galore. (The vista dome railroad car was invented for the benefit of passengers on the Denver to Salt Lake City run.) The Yellow Cab Company offers private tours around the state at reasonable prices, a four-hour 63-mile tour of Denver's mountain parks, for example, runs \$4.50 per passenger, minimum of five fares.

There are all kinds of resorts. from the Broadmoor in Colorado Springs to the dude ranches. The Broadmoor is one of the world's great resorts with every amenity and every kind of sport and entertainment including its own golf course, all-year indoor ice skating

and its own theater. Everything is elegant, the best—even a choice of bedroom decor: comfy old-style or modern high-style.

The dude ranches vary from working ranches that tolerate a few visiting dudes to the luxury type that specialize in dudes. (A dude is anybody who wasn't born on the back of a horse.) For water lovers, Grand Lake features the highest yacht anchorage in the world. Georgetown, Cripple Creek, Durango and Silverton are old mining towns, the latter two joined by a narrow-gauge scenic railroad.

Central City, 35 miles west of Denver, has the nation's most famous summer opera and is visited each summer by thousands from throughout the country.

The opera house was constructed in 1878 when the mountain town, founded by gold prospectors, was Colorado's largest city and was called "the richest square mile on earth" because of its fabulous mines. The opera was revived in 1932, bringing new life to the town.

Estes Park is a mountain park resort area; Mesa Verde has the largest remaining community built by the cliff dwellers; Colorado Springs, in addition to the Broadmoor, has the Air Force Academy, the Garden of the Gods (a geological wonder) and an excellent Art Museum; and then there is Aspen, a town that has everything. It has sports, scenery, history, night life, good food, wonderful shops, kooky people, the Music Festival and the Design Conference—but most of all, it has atmosphere.

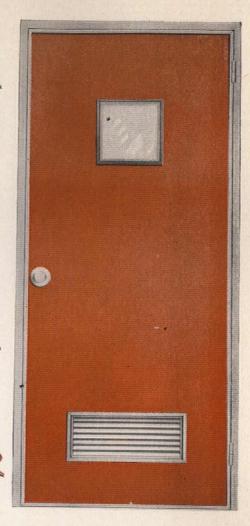
For true outdoor buffs, the camping facilities are excellent and there are all kinds of pack trips. Horse lovers will find a variety of attractions through the state; thoroughbred and quarter horse racing in Denver and in Fountain (south of Colorado Springs), polo games, horse shows featuring most show breeds (although saddlebreds and harness horses are in short supply), and lots and lots of rodeos! There is a rodeo somewhere in the state almost every weekend.

A final word of warning to those who may be planning to spend some time outside of Denver in Colorado's Touristland: reservations! They are necessary everywhere and the best places are booked up well in advance. For specific information about places to stay, write to: Colorado Hospitality Center, 225 West Colfax Ave., Denver, Colo. 80202.

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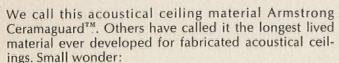
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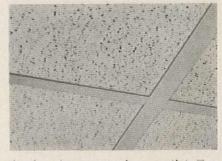
is last.



Ceramaguard is unusually resistant to moisture. It can't be hurt by freezing or thawing. It has exceptional rigidity and span strength (even soaking wet, the panels won't sag). It washes easily, takes washing repeatedly (special acrylic finish has five times the scrub-resistance of standard paints). It's even resistant to chlorine atmosphere (Ceramaguard has been used successfully in enclosed swimming pools).

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the handsome (and versatile) Travertine pattern. Now for the savings. Since Ceramaguard is moisture resistant, it can be installed whether your building is closed or not; whether wet work is going on or not; without special precautions for ventilation or drying. And the completed assembly is fire retardant, so you don't need any intermediate fire protection above the suspended ceiling. All this adds up to both time and dollar savings. As much as six weeks and 30¢ a square foot in some cases.

Like to know more about Armstrong Ceramaguard? Just ask. Armstrong, 4206 Sage St., Lancaster, Pa.



## What are the ugliest products in the world?

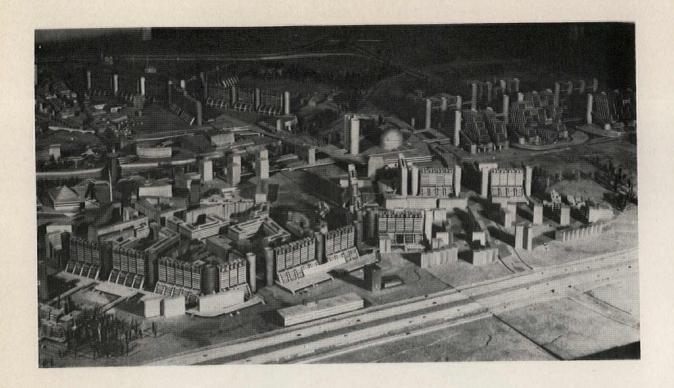
Not too long ago most architects would probably have voted that dubious honor to fire extinguishers. For example—less than 20 years ago the little beauty below was not only the most effective extinguisher available, but just about the most attractive. Today, everything has changed. At Ansul, the name of the game is design! Design for better performance and better appearance. The Ansul dry chemical unit at the right not only looks good but is, by actual UL test, 9 times as effective as the best

comparable extinguisher of 20 years ago. Another Ansul unit, our new ENSIGN pressurized fiber glass water extinguisher, is available in 48 different decorator colors to meet the esthetic requirements of today's architects. Ansul, the world's leading manufacturer of fire protection equipment, has created a broad line of extinguishers intended to visually enhance your building. We offer a complete consulting service to architects... so when fire protection problems come up, call on Ansul.





JUNE 1966



# Tange in Skopje

It was nearly three years ago that the world was stunned by the tragedy which struck Skopje, Yugoslavia, and its 230,000 residents. A massive earthquake had killed many, destroyed much.

The United Nations undertook the sponsorship of an international competition for the design of Skopje's center and consulted with the Union of International Architects' representative to the UN, Frederick G. Frost Jr, FAIA of New York.

Arrangements for the competition, jointly sponsored by Yugoslavia, were made promptly and eight firms were invited to submit. All submissions, the jury said, contained a variety of promising ideas and proposals.

The entry of Kenzo Tange, 1966 AIA Gold Medalist, was selected as the prime winner—the best of a creative field of entrants, four of them from Yugoslavia and all doing their utmost for the devastated city.

"The competition," Frost said, "demonstrated the United Nations' ability to contribute in a major way to the advancement of urban planning and indicated the role the UIA can play."

A jury that deliberated for nine days split the \$20,000 prize money

—\$12,000 to the Tange team and \$8,000 to the Town Planning Institute of Zagreb.

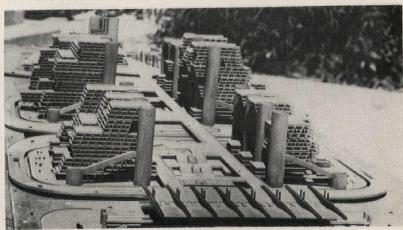
The Tange proposal dealt with "many aspects of the plan in a serious, original and inspired way," the jury felt, adding, however, that Tange and the Yugoslavian firm together provided the best ideas from two different points of view.

Town Planning was cited for its contributions to efficient and practical realization of the reconstruction and to the development of small area schemes within the plan.

The Tange plan was praised for its pedestrian provisions, design and scale of the distribution of the main functions of the center along its core axis, the siting of new cultural facilities and monuments and the high quality of the architectural interpretation of the larger structures and the planning and design of urban ensembles. The traffic provisions and scale of some buildings were criticized.

The jury concluded that no one entry should be the single basis for implementing the reconstruction of Skopje's center.

But it gave its greatest applause to the Tange scheme for the "high quality of its overall design composition . . . and the detailed layout of ensembles."



Newslines from page 50

came law, an architect would be well advised to select only those building materials (e.g., union made) which would not incite a labor union to refuse to perform services at the building site.

"This would have the undesirable effect of tending to deprive an architect of his free choice in the selection of building materials. It is quite apparent that it would be exceedingly difficult for an architect to serve his client under such an onus."

The bill is also opposed by the Associated General Contractors, the National Association of Home Builders and, in a word, virtually the entire industry.

Should the measure become law, a labor dispute between a single contractor and his union which resulted in a strike could have the effect of closing down the entire project upon which the involved contractor was employed.

Moreover, any other construction sites upon which the contractor was engaged could be shut down too.

#### Vigor Marks Conference On Church Architecture

If assertive, challenging and conflicting ideas were building materials, those generated by the National Conference on Religious Architecture would suffice for an edifice dwarfing the entire Gothic output.

One theologian startled the more than 700 leading American architects, artists and churchmen gathered in San Francisco by asking if they are building too many churches.

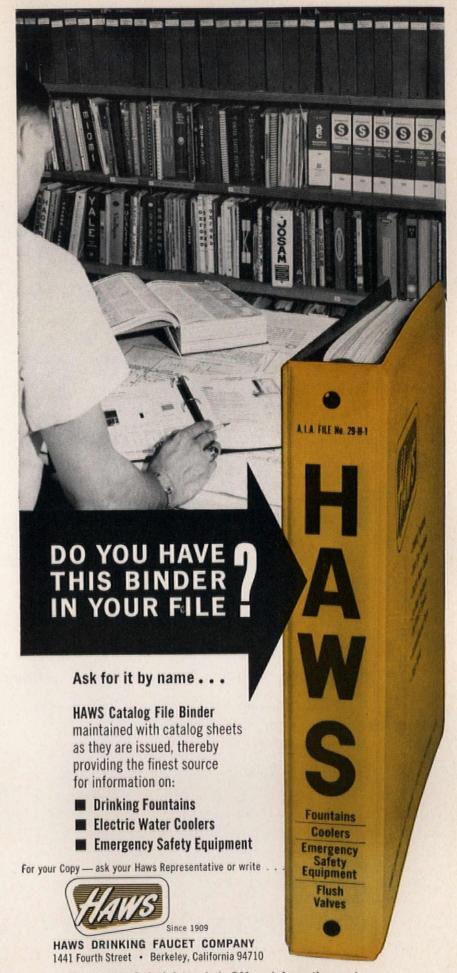
"Are not the immediate needs of starving men today such that we must never take for granted our right to build?" asked the noted Dr. Robert McAfee Brown, professor of religion at Stanford University.

"Is a beautiful church really an invitation to worship the Lord in the beauty of holiness, or an indictment of our callous lack of concern that the world around the church is made ugly by our indifference to human need?"

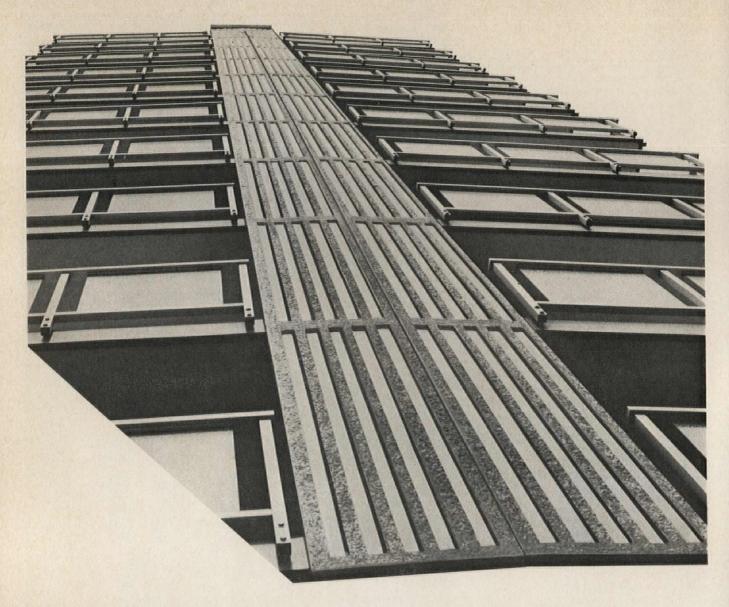
Brown, keynote speaker for the April 26-28 conference, the 27th and the first under the Guild for Religious Architecture's affiliation with the AIA, declared that no space in modern society is less efficiently used than is church space.

It was also the first conference to include official Roman Catholic

Continued on page 132



For more technical data, circle 241 on information card



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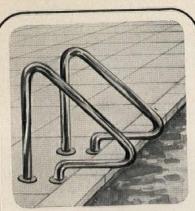
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Newslines from page 129

and Jewish representatives as well as Protestant, and Brown suggested multiple use of new church buildings by several denominations.

He looked forward to a time when a Protestant church and a Jewish temple or a Catholic parish will work out arrangements for building and using the same facilities, "not only as an emblem of the healing of some terrible historical scars but as a simple exercise in good economy and logistics.'

The Rev. Peter Hammond, visiting professor of art history at Tulane University, inveighed against towering churches-"monumental anachronisms."

Mr. Hammond was among the conference advocates of a simple straightforward house for the community, serving as an expression of its relatedness to community problems and hopes, instead of the monumental edifice.

But there was dissent. Rabbi Joseph B. Glaser, San Francisco director of the Union of American Hebrew Congregations, noted: "We must avoid the rush to make of the sanctuary a multipurpose room. A sacred sanctuary is needed."

William M. Cooley AIA of Chicago, who was re-elected president of the Guild, summed up:

"We've been hearing that God is dead, that art is dead, that architecture is dead and, as a final blow, that conferences should be dead. However, all of these things must go on. The people responsible for building churches must do something positive. They can't stand that many negative assertions.'

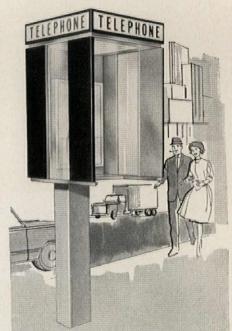
Cooley may have had reference to the comments of Patrick J. Quinn, professor of architecture, University of California at Berkeley. Quinn said such meetings as the conference were made up of "statements of sterility.'

He proposed instead a series of on-going workshops throughout the nation for better church buildings and a new understanding of the relationship between Christianity and

Further, he considered the single significant act of the three-day conference the recommendation of an artist jury that the conference hold no ecclesiastical art exhibition this year, and he suggested the exhibit space be draped in black. With this done, he said, "we might get somewhere.'

The arts jury said too few of the Continued on page 134

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Circle 245 on information card AIA JOURNAL



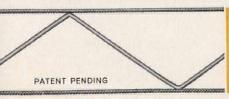


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350 works submitted were good enough to warrant an exhibition. Dr. Henry Lee Willett of Philadelphia, conference program planning chairman, said the annual exhibitions are followed by seminars pointing up improvements in this adjunct to church architecture. Unfortunately, he said, the jury was unaware of the purpose and need of the exhibition.

As for design, Institute Vice President Robert L. Durham FAIA said there is "no doubt that church architecture has improved. We see more attention paid to simplicity and logical use of materials."

Edward Anders Sovik AIA, of Northfield, Minn., re-elected Guild vice president, noted that the Vatican Council stirred Roman Catholic laymen to redesign churches fitting into their liturgy, and he challenged Protestants to "catch up with Catholics" in this respect.

Edward Larrabee Barnes FAIA of New York, keynoter for the final session, suggested that architects ask themselves whether well-known forms are true today or are just a polite, acceptable pattern. He urged simple churches, "maybe box-like with no stained glass, austere and certainly new, that will somehow bring a congregation in confrontation with spiritual values not found in a church which is a pretty picture."

The National Council of Churches, the Guild and the AIA were conference sponsors.

Four churches received 1966 church architecture awards from a total of 188 entries. Jury members were Charles Edward Bassett AIA of San Francisco, Robert C. Alexander FAIA of Los Angeles, and Mr. Hammond who is from Hull, England. The churches and their architects:

St. Leo's Roman Catholic Church (remodeled), Solana Beach, Calif., Delawie & Macy, San Diego,

John Knox Presbyterian Church, Marietta, Ga., Toombs, Amisano & Wells, Atlanta.

Westminster Congregational Society Church (Unitarian), East Greenwich, R. I., William Warner AIA, Providence, R. I.

Parish Hall for Christ Church, Sausalito, Calif., Henrik Bull & Associates, San Francisco.

The jurors' finding of excellence was in line with a decided majority of conferees who argued that there are many recent structures, both religious and secular, which meet today's needs.

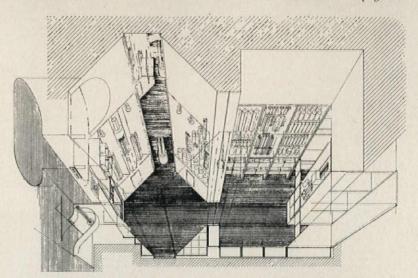
#### Viennese Waltzes Away with Reynolds Prize

A 32-year-old Viennese architect is the winner of this year's \$25,000 R. S. Reynolds Memorial Award for his design of a candle shop with a floor area of 160 square feet. That figures out to about \$156 prize money per square foot.

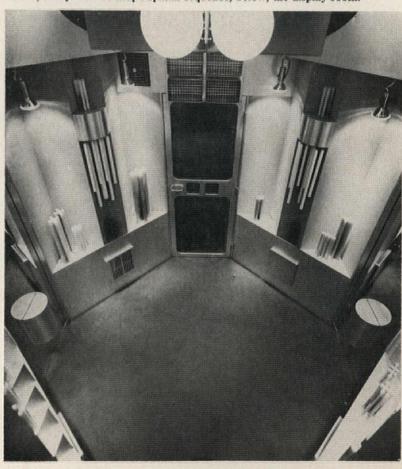
Hans Hollein is the recipient and the shop—his design for which was termed "remarkable" by the jury is located in one of Vienna's fine shopping streets. The jury of the AIA, which administers the project, said the shop was among the smallest of the 67 submissions, yet was a significant work of architecture with its "fresh, invigorating" use of aluminum.

Hollein, who has studied and lectured extensively in the United States, will receive the 10th international award for "distinguished

Continued on page 138



Above, X-ray view of shop's spatial sequence; below, the display room.





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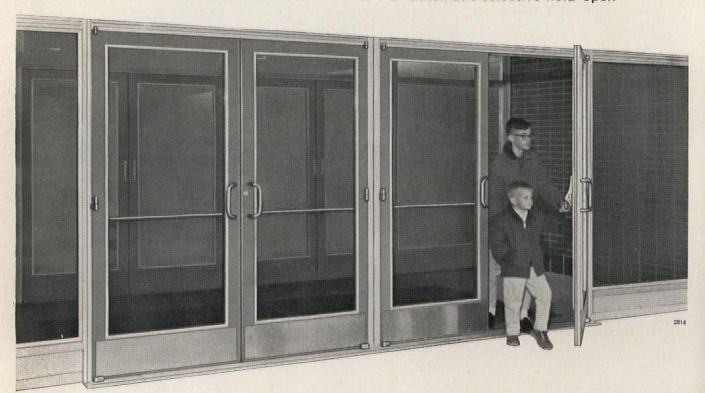
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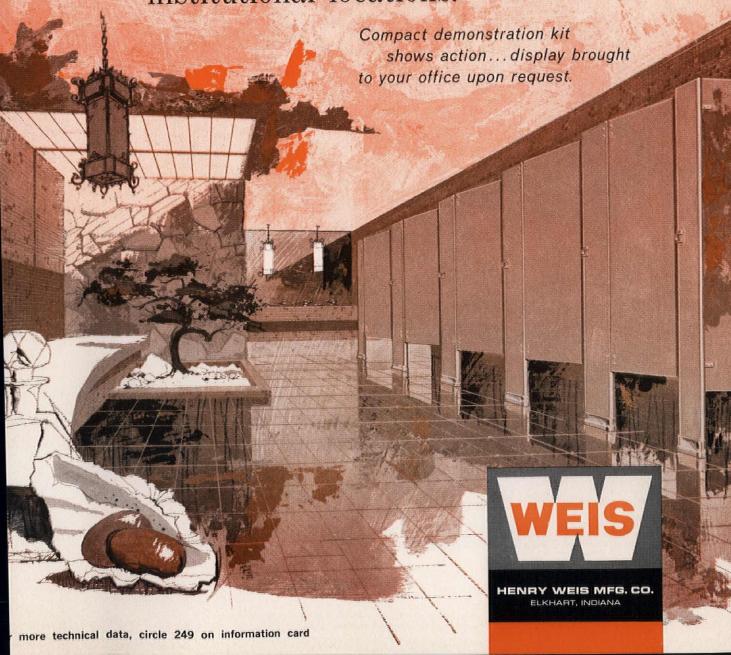
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Newslines from page 134

achievement in architecture with significant use of aluminum" June 28 at the AIA's Denver convention.

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Edward A. Killingsworth FAIA, Long Beach, Calif., was jury chairman. Members were James Gowan, London, England, one of the winners of last year's prize; Romaldo Giurgola AIA, Philadelphia; Harwell Hamilton Harris FAIA, Raleigh, N. C.; and Lewis Davis AIA, New York.

#### Ketchum Urges Bypass Of 'Needless Conflict'

Institute President Morris Ketchum Jr. FAIA has asked Congress to establish clear methods of cooperation between the Department of Housing and Urban Development and the proposed Department of Transportation on urban transportation matters.

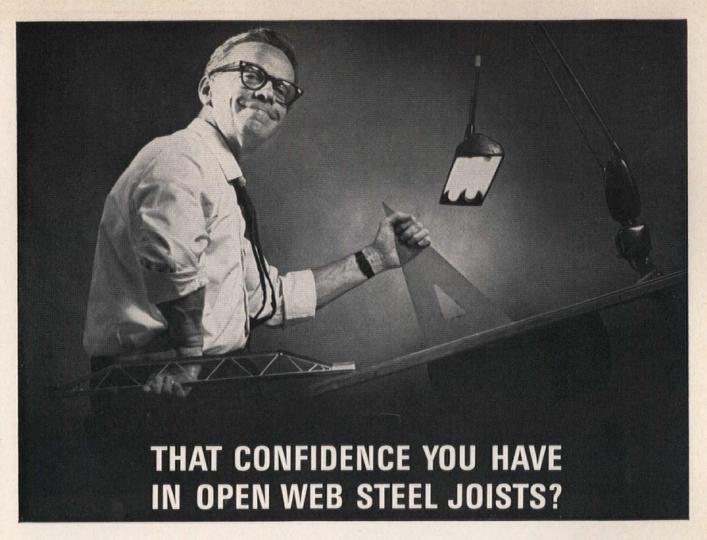
And Ketchum would have those methods spelled out *before* the creation of the latter department.

In letters to the government operations committees of the House and Senate, Ketchum said the Institute recognizes the proposed department would have concomitant responsibilities in urban transportation.

But he said the AIA has reservations about the partnership approach to urban transportation recommended by President Johnson. "It would be unfortunate," he said,

Continued on page 144

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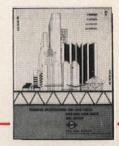
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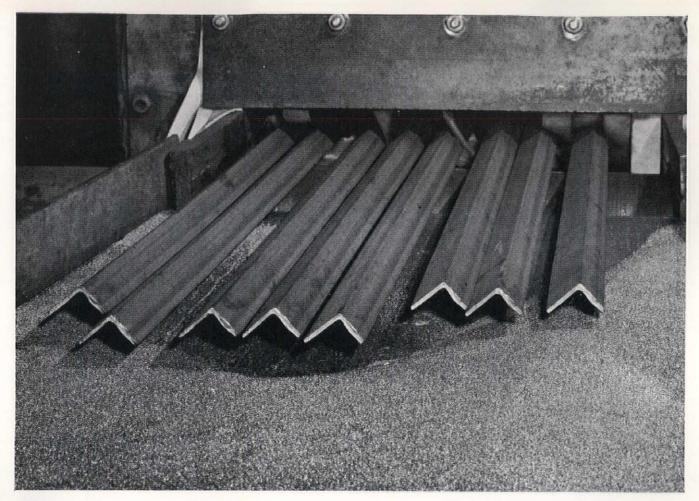
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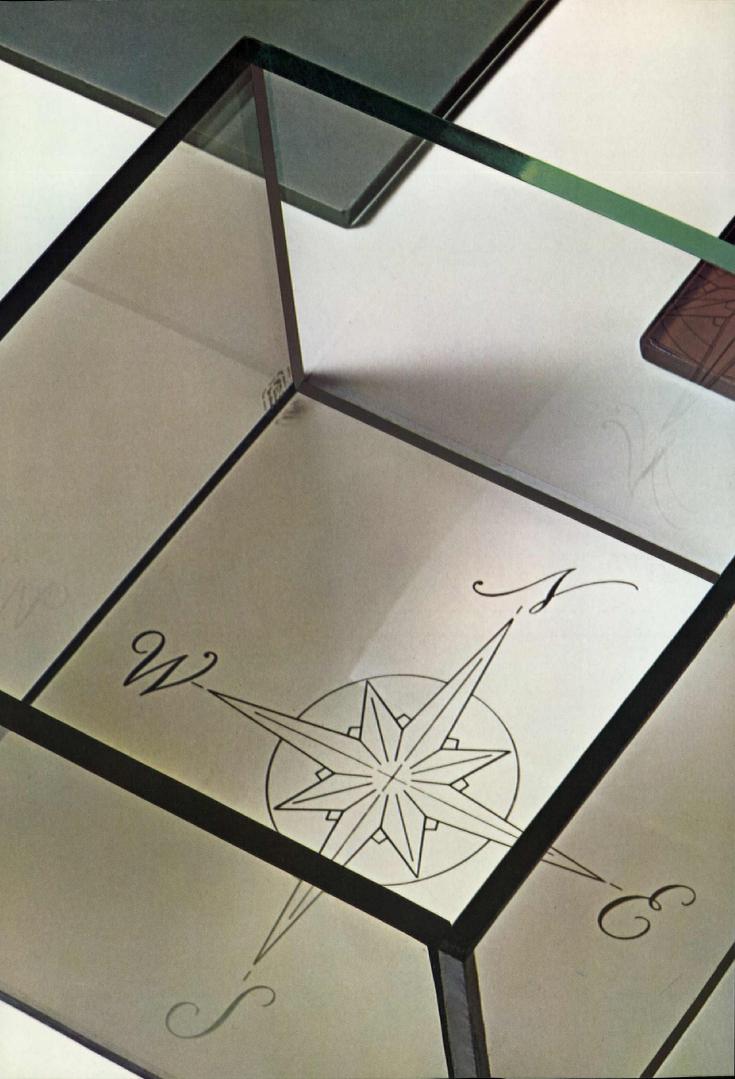






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Newslines from page 138

"to curtail the Department of Housing and Urban Development in this one area of urban planning before it has had an opportunity to demonstrate its utility.

"To avoid needless conflict, Congress should ascertain the modus operandi of cooperation between the two departments before the Department of Transportation is established."

Added Ketchum: "Postponing for a year the 'means and procedures by which this cooperation can be effected,' as President Johnson recommended in his Transportation Message, may only serve to compound urban transportation problems."

# Series on Architecture Returns to Airwayes

The radio series of Jeffrey Ellis Aronin AIA, called "Architecture in the Space Age," has been resumed over New York's stations WNYC and WNYC-FM.

The show, heard Wednesdays from 10:30 to 10:55 p.m., had as its first guest Institute President Morris Ketchum Jr. FAIA.

education

# Planning Society Formed To Aid Campus Growth

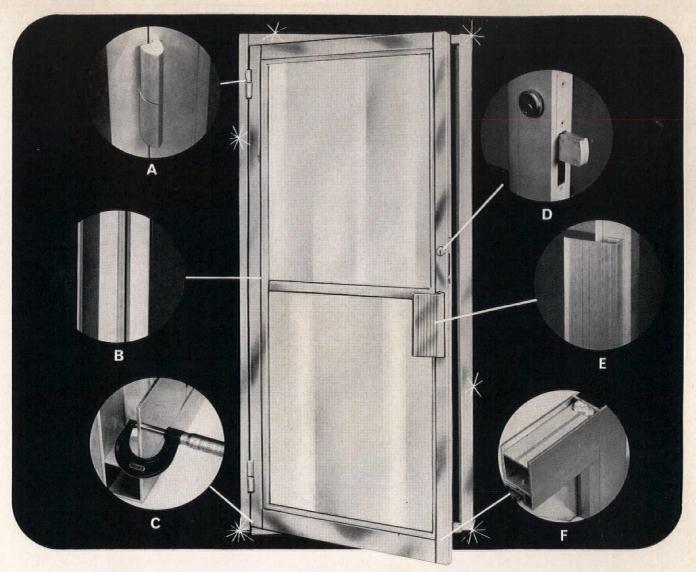
A Society for College and University Planning has been formed to advance the effectiveness of campus planning and is head-quartered at the University of Michigan.

The society initially will be a clearinghouse for data relating to college and university expansion, currently running an estimated \$1 billion yearly. Among other services it will undertake is programming for conferences. Membership is open to anyone interested in campus planning.

▶ Beginning with the next school year, students entering the University of Manitoba with the intention of studying architecture or landscape architecture will register in a three-year curriculum leading to the degree of Bachelor of Environmental Studies.

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Continued on page 146



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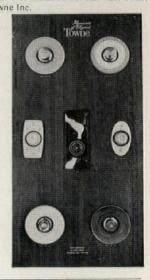
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TOWNE HARDWARE DIVISION





Newslines from page 144

or to a two-year curriculum leading to a Bachelor of Landscape Architecture degree.

► The Architectural League of New York has awarded its first J. Clawson Mills Fellowship in Architecture to Michael Wayne Baker, an instructor in architecture at the University of California at Berkeley.

The one-year \$7,500 fellowship was established to enable an instructor in architecture to complete his studies for an advanced degree in architecture. The initial selection was made on the recommendation of the AIA Committee on Collaborating Arts.

Baker, who received his bachelor's degree in architecture from the university last year, graduating with highest honors, proposes to probe the architectural curriculum and its relationship to other academic disciplines while seeking his master's degree in architecture. ► A grant from International Business Machines Corp. to the International Design Conference in Aspen makes possible a traveling fellowship program for architectural and industrial and graphic design students of foreign countries.

The first year's program will have 10 students from Great Britain in the United States to attend the Aspen conference on "Sources and Resources of 20th Century Design" June 19-25. They will then travel across the nation for about two weeks.

► Eight architectural students representing as many universities were awarded \$1,000 each to continue their education under the ninth annual Koppers Architectural Student Design Competition.

The winning students and their schools in the hypothetical design competition are: Jorge Machado, Catholic University of America; Charles T. Smith, Clemson University; James Goettsch, Iowa State University; John F. Webster, Kent State University; Edward A. Rhodes, Ohio State University; Franklin H. Roberts Jr., Texas A & M University; David F. Aschbacher, University of Illinois; and Joseph C. Garcia, Yale University.

▶ James F. Knight, University of Illinois graduate architecture student, has won the 1966 Lloyd Warren Fellowship. Known as the Paris Prize, the fellowship provides \$5,000 for one year's travel and study in Europe.

► The Pittsburgh Plate Glass Foundation's \$15,000 grant, prize of a foundation-sponsored competitition on the physical development of the city of the future, was won by Texas A&M University.

The competition was held among civil engineering departments of seven universities and was based on the question of how the universities would use the funds "to extend knowledge and understanding of the problems of physical development of tomorrow's cities."

► More than 55 percent of a group of 2,528 registered professional engineers has taken and completed some type of formally organized, continuing education from 1960-65.

This was shown in a survey by the Professional Engineers in Industry, a section of the National Society of Professional Engineers. Questionnaires mailed to 5,000 members of the society resulted in a 50 percent response.

► Felix Candela HON. FAIA is the second recipient of the Thomas Jefferson Professorship in Architecture at the University of Virginia's School of Architecture. The Mexico City architect will be at the school until May 18.

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For more technical data, circle 285 on information card JUNE 1966

# CONVENTION HIGHLIGHTS

(All events in the Denver Hilton unless otherwise noted)

# SUNDAY, JUNE 26

11 a.m.: Registration; Products Exhibit, AIA Service Center, Host Chapter ticket booth, in Ballroom complex; professional exhibits and Hospitality Lounge, Hilton Showcase

#### MONDAY, JUNE 27

9 a.m.: Inaugural Session, presentation of Honorary Memberships and Citation of an Organization, and Keynote Address

12 noon: Official ceremonies in Products Exhibit area

2:30 p.m.: Business Session 1; award of medals

5:30 p.m.: Buses leave for Central City

**6:30 p.m.:** President's Reception (Central City, Old Teller House Garden)

8 p.m.: "A Night at Historic Central City" (Gala Host Chapter Event)

8 p.m.: Buses begin return to Denver

8:30 p.m.: Opera "Carmen" (Teller Opera House)

#### TUESDAY, JUNE 28

9 a.m.: First Theme Seminar—"Technology"

1 p.m.: Awards Luncheon

2:30 p.m. Workshops

**6:30 p.m.:** "Architects at Home" Parties (Host Chapter, by invitation)

# WEDNESDAY, JUNE 29

8 a.m.: Buses depart for Air Force Academy

10 a.m.: Tour of Air Force Academy

3:15 p.m.: Purves Memorial Lecture (Arnold Hall, Air Force Academy)



## THURSDAY, JUNE 30

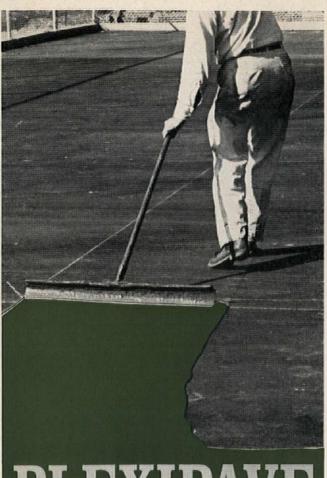
8 a.m.: Balloting for national AIA officers and directors begins

9 a.m.: Second Theme Seminar-"Environment"

2:30 p.m.: Business Session 2, Edward C. Kemper

7:30 p.m.: Convocation of Fellows Dinner (University Club, Denver)

Continued on page 148



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#### FRIDAY, JULY 1

9 a.m.: Third Theme Seminar-"Man"

12 noon: Alumni Luncheons

2:30 p.m.: Workshops

7:30 p.m.: Annual Dinner and Ball, presentation of Gold Medal, investiture of Fellows and Honorary

Fellows

#### SATURDAY, JULY 2

9 a.m.: Organization Meeting, Board of Directors

NCARB Annual Meeting Denver Hilton

#### FRIDAY, JUNE 24

8 a.m.: Registration

9:30 a.m.: Business Session annual reports

1:30 p.m.: Business Session

6 p.m.: Social Hour

#### SATURDAY, JUNE 25

9 a.m.: Business Session—Committee on Examina-

1:30 p.m.: Reports from collateral organizations

6 p.m.: Social Hour (Hiwan Country Club)

8 p.m.: Banquet and installation of officers by Institute First Vice President Charles M. Nes Jr. FAIA

ACSA Annual Meeting Brown Palace

# FRIDAY, JUNE 24

9:30 a.m.: Registration

# SATURDAY, JUNE 25

9:30 a.m.: Annual Meeting 2 p.m.: Business Session 1

6:30 p.m.: Social Hour and Banquet



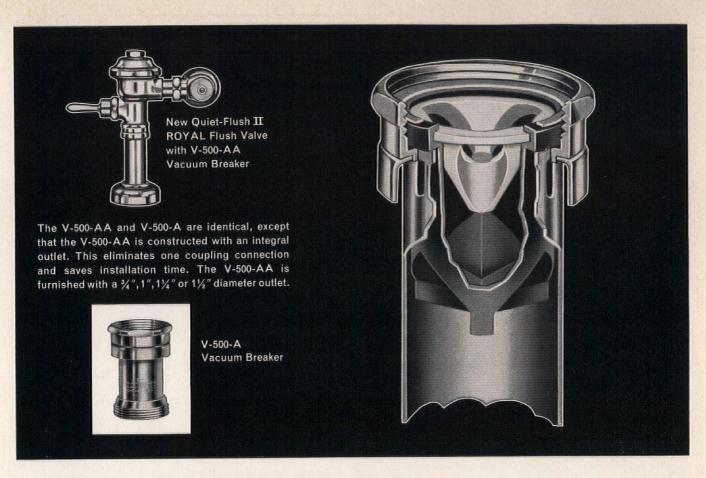
#### SUNDAY, JUNE 26

9:30 a.m.: Business Session 2

NAAB Annual Meeting Denver Hilton, Room 501

FRIDAY & SATURDAY, JUNE 24-25

9 a.m.: Business Session



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See the entire Pinstripe family of glasses at Booth D-13 at the AIA Show.





the streets with silver dollars—as we did for President Grant's reception there—we do promise one (1) on which Isabella can stand tippy-toe to greet you!

We're sorry that the Opera House holds only 795, and so we must insist on "first come, first served" on your reservations. There will be no scalping. Buses will be available to return to Denver as early, or as late, as you wish.

The big chuck wagon dinner under the big top will feature our local specialties, and we have a surprise or two in store for you.

Remember—I repeat—remember, Central City can be cool when the sun sets. Bring a warm jacket or sweater and remember also that liquor can "get to you" at high altitudes, so be sure to try that "next to the last drink" on for size before deciding. We will have a medic or two, some oxygen and a place to lie down if you don't acclimate readily. No worry.

You girls will have the traditional Fashion Show and Luncheon of course, but with a switch. This one will feature "buckskin and beads"—authentic Indian costumes out of the Denver Museum's priceless collection and not a one for sale! (So the architect in your life can rest easy, except for the sneak punch: Our ladies are also doing a Shopping Guide for you.)



We are assuming that you will come early, or stay late, and combine a few days of touring or vacation and that you will bring the kids. So we've got a teenage swimming party and a teenage pad at the hotel; also, an afternoon at Elitch's (our amusement park, which is modeled after Den-

mark's famous Tivoli), and a command performance by the Westernaires, our world-famous teenage precision riding club, and our top western horsemen and horseladies (cowboys and cowgirls, if you insist!). Our ladies and teenagers are geared for the impromptu too—you name it and we'll do it.

For the few days before, or after, the convention, a card to the Denver Visitor's Center, or to the chairman of our Host Chapter Committee, Edward D. White AIA, 5909 E. 38th Ave., Denver, will bring you literature on all of the possibilities for vacationing, from guest ranches to tours. Ed White will help you with arrangements, etc.



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JAMES M. HUNTER, FAIA Chairman 1966 National Convention



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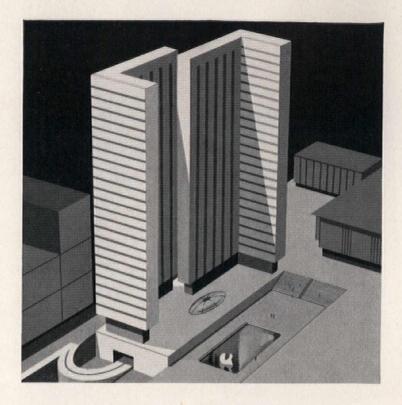


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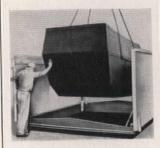
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# BOOKS

Changing Ideals in Modern Architecture 1750-1950. Peter Collins. Montreal: McGill University Press, 1965. 307 pp. \$12.50
Architects will find some of their

Architects will find some of their most cherished beliefs about the nature of their art demolished by this author. Their slogans, philosophies, credos are examined, dissected and left lying in fragments. Concepts like "sincerity," "truth," "organic," "expression," "functionalism," "design," "unity of the arts,," "research," "simplicity," "space" and "space-time" are pulled apart and their limitations revealed.

Professor Collins clings to a few beliefs such as the architect's obligation to submit to the program, to express the structural means honestly and to harmonize new buildings with the existing environment. All three of these principles are, as we all know, frequently ignored whenever an architect puts some other value ahead of them. But the main emphasis is on the history of the fallacious or limited ideas still current. Ingeniously the author demonstrates that they often have an ancestry 200 years old. Some of these revelations are surprising, some of them will not be considered as proved.

To this reader the notion that the last two centuries have been transitional between two periods of relative orthodoxy is hard to accept, as are Collins' great leaps in time, such as those in which he juxtaposes statements separated by three or four generations without clarifying these time intervals.

It is not apparent for what audience the book was written—professional architects, students or scholars—since while the text is innocent of footnotes and the usual bibliographical apparatus so helpful to scholars and students, yet it is not written in a light, off-hand or facile style. Serious application is required to follow the argument which is frequently close and intricate. It reads like a scholarly work which has been deprived of its roots, perhaps by the publisher hoping thereby to enlarge his sales.

Collins displays immense learning and makes admirable use of telling quotations from obscure as well as familiar sources—most,

though not all, from English or French authors.

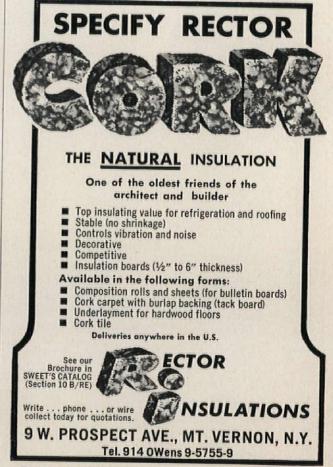
As with all good writers, a certain amount of personal subjective opinion lends spice. The author continues to show in this book his belief in the architectural supremacy of France, particularly in that of his master Perret. He is strongly prejudiced against the Art Nouveau which he considers to be wholly without value. He does not hesitate to attribute feet of clay to such modern idols as Rietveld, Mies van der Rohe or Le Corbusier. In dealing with the shibboleths of the 20th century he is sarcastic, acid and dogmatic. These sections are sure to stir up cries of protest. He is quite severe on art historical methods and personalities although he himself is acting as one in this book. He would probably prefer to be regarded as a critic, which is not such a distinct role as he may believe.

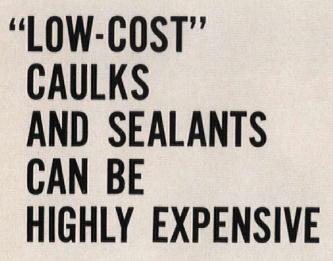
A novel section is devoted to the gastronomic analogy with functional architecture. Among other attacks made here is one on some modern architects' belief that it is not necessary for their buildings to give pleasure to the public. This arrogant attitude is frequently derided

Continued on page 160



156







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throughout the book. Similarly the emphasis placed today upon novelty, and hence the worthlessness of tradition, are condemned both as they affect the program and the design.

Probably the last word on these and many other current notions will not be said for many years, but we can give Professor Collins full marks for a violent, stimulating critique of the present position of architecture and the theories about it which have been our prime movers.

CARROLL L. V. MEEKS

The Work of Frank Lloyd Wright. New York: Horizon, 1965. 164 pp. \$42.50

The original edition of this work, edited and arranged typographically by T. T. Wijdeveld, was an anthology of seven numbers of the art journal *Wendingen* (Amsterdam Series 7, Nos. 3-9, 1925) and contained "many articles by famous European architects and American writers." The 1965 edition is similar in that it keeps the double-fold pages, printed on one side of each sheet, as well as the specially hinged

binding. Eleven plates have been substituted by so-called "superior views," furnished by the Frank Lloyd Wright Foundation, and dates of buildings (lacking in the earlier edition) are given for each of the structures with their names and locales.

Mrs. Olgivanna Lloyd Wright has written an introduction for the present edition in which she emphasizes how dearly her husband cherished the *Wendingen* edition, keeping it near him at all times, "always enjoying its beauty." Mrs. Wright says, "To him this was the book on architecture that would be good a hundred years from now." It is regrettable that the photographs in this edition are so miserably reproduced.

Craftsmen of the Southwest. American Craftsmen's Council, Southwest Region, 1965 (Dist. by ACC, 29 W. 53rd St., New York, and Museum West, Ghirardelli Square, San Francisco). 238 pp. \$5

Those concerned about the collaboration of art and architecture will welcome this directory of source information on 151 artist craftsmen residing in the Southwest. Biographical information for the individuals listed includes mention of awards, exhibitions, published work, commissions and education. There are photographs of examples of representative work as well. The directory is arranged by media: metal, clay, textiles, wood, glass, bookbinding, sandcasting, wax and mosaics, with a concluding section on crafts in architecture.

Concrete Technology and Practice. W. H. Taylor. New York: American Elsevier Publishing Co., 1965. 639 pp. \$15

A comprehensive compendium on the properties and behavior of concrete, written by a research engineer associated with the Division of Building Research, CSIRO, Australia. Copious information is given on every phase of concrete work including sections on such topics as fabrication processes, new materials and factors affecting durability. The usefulness of the book is augmented by extensive bibliographies, a glossary, and a comprehensive reference list and table of Australian, British and American standard specifications. There are numerous diagrams and tables.

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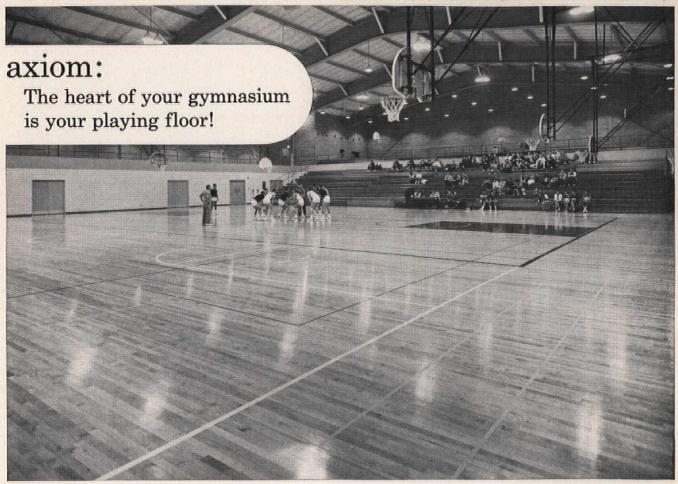
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# **RESEARCH PROJECTS**

## University of California (Berkeley)

"Architectural Criteria for Design Decisions": Development of new research tools for design decision, using a hospital radiology department as test of project validity. Roslyn Lindheim. Sponsor, USPHS. Budget, \$24,000. Begun, 1963; anticipated completion, 1966.

"Our Changing Environment-How Does Architecture Prepare to Cope with Demands": Sami Hassid. Sponsor, Department of Architecture. Budget, \$850. Begun, October 1965; anticipated completion, June

"The Effects of Wind on Public Spaces": William Liskamm. Sponsor, Department of Architecture. Budget, \$700. Begun, October 1965; anticipated completion, June 1966.

#### University of Florida

"Investigation of Modeling Materials and Techniques in the Simulation of Reinforced Concrete Behavior": A continuing study involving the materials and techniques of modeling prototype reinforced structures. Experimentation and analysis to determine the accuracy and feasibility of various methods. R. E. Shaeffer. Sponsor, Department of Architecture & Florida Concrete Products Association. Budget, \$800 per year plus staff time. Begun, November 1964; completion time not determined.

#### University of Illinois (Urbana)

"Improving the Quality of Housing Environments Through Cooperative Action on the Part of Government Agencies and the Design Professions": Study determines how effective joint action on the part of European government housing agencies, responsible for broad community needs, and individual architects and other professionals, trained in building design and housing site layout, can be coordinated. Sponsors, AIA, Graham Foundation for Advanced Studies in the Fine Arts. Budget, \$7,000. Begun, February 1966; anticipated completion, 1967.

"Uni-Town-A Study of a New University Community": A design potential study of a new community near the Argonne National Laboratory, Chicago. A. R. Williams, R. D. Katz, D. L. Walker and graduate students. Sponsor, Graham Foundation. Budget, \$2,500. Begun, October 1965; anticipated completion, 1966.

#### Massachusetts Institute of Technology

"A Structural System for Prefabricated School Buildings": Design of a prefabricated component system for the marketing and construction of school building space. M. E. Goody and J. J. Schiffer. Sponsor, Educational Facilities Laboratories, Inc. Budget \$150,000. Begun, 1960; anticipated completion, unknown.

"Systems Analysis in Building Design": An investigation into the design techniques for complexes of buildings. Computer techniques where applicable, will be related to the interrelated decision processes employed in design. A. G. H. Dietz, M. E. Goody and A. Hershdorfer. Sponsor, National Science Foundation. Budget, \$40,000/year. Begun, September 1965; anticipated completion 1967.



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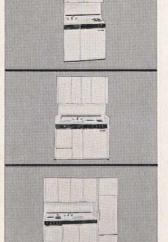
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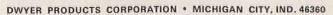
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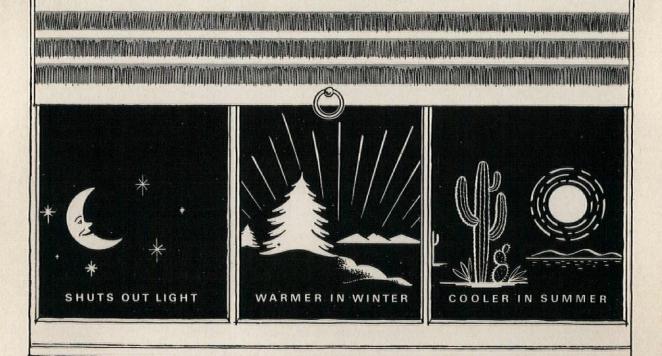








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# CALENDAR

June 21-24: American Hospital Association Institute on Design, Denver

June 24-25: NAAB Annual Meeting, Denver Hilton Hotel, Denver; NCARB Annual Convention, Denver Hilton

June 24-26: ACSA Annual Convention, Brown Palace Hotel, Denver

June 26-July 1: AIA Annual Convention, Denver Hilton Hotel, Denver

July 4-15: International Seminar on Ekistics and the Future of Human Settlements, Athens, Greece

July 6-9: National Society of Professional Engineers, Annual Meeting, Capp Towers Motor Hotel, Minneapolis

#### **AIA Regional and State Conventions**

July 21-23: North Carolina Chapter, Grove Park Inn, Asheville

Sept. 8-10: New Jersey Society of Architects, Essex and Sussex Hotel, Spring Lake

Sept. 29-Oct. 1: Illinois Council, Ramada Inn, Champaign

Oct. 5-8: Florida Association of Architects, Deauville Hotel, Miami Beach

Oct. 6-9: East-Central Region, Brown Hotel, Louisville, Ky.; New York State Association of Architects, Whiteface Inn, Lake Placid; California Council, Monterey County Fair Grounds, Monterey

Oct. 7-9: New England Region, Sturbridge Village, Mass.

Oct. 12-15: Western Mountain Region, La Fonda Hotel, Sante Fe, N. M.

Oct. 13-15: Architects Society of Ohio, Carrousel Inn, Cincinnati; Louisiana Architects Association, Jack Tar Capitol House Hotel, Baton Rouge

Oct. 20-22: Pennsylvania Society of Architects, Hotel Hershey, Hershey

Oct. 24-26: Northwest Region, Benjamin Franklin Hotel, Seattle

Oct. 27-29: South Atlantic Region, Queen Charlotte Hotel, Charlotte, N.C.

Nov. 3-5: Central States Region, Lassen Hotel, Wichita, Kan.

# AIA Committee and Related Meetings

(At the Octagon unless otherwise noted)

June 5-11: AIA-ACSA Teachers Seminar, Cranbrook June 10: Office Procedures

June 17-19: School & College Architecture in conjunction with UIA School Commission, San Francisco

June 26: Preservation Officers Symposium, DenverJuly 14: AIA-American Association Medical ClinicsJury

# Tours

July 12-Aug. 2: Study Tour of American Architects, Sweden, Finland, Poland and USSR, Treasure Tours Inc., Office of Academic Liaison, 1010 St. Catherine W., Montreal, Quebec, Canada

Oct. 7-31: Architecture and Gardens Tour of Japan, led by Kenneth M. Nishimoto AIA, 263 S. Los Robles Ave., Pasadena, Calif. 91106; also optional extension to Hong Kong, Oct. 31-Nov. 3

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# **LETTERS**

## Coal Mine on the Cover?

EDITOR:

It seems to me the cover photograph on the April issue is directly contradictory to the AIA movie "No Time for Ugliness" which I saw the other night. It looks like a picture of the head structures of an abandoned coal mine!

PRESTON M. GEREN, AIA Fort Worth, Tex.

ED NOTE: Incidentally, the "abandoned coal mine" is represented in the "Forty Architects Under Forty" exhibition organized by the Architectural League of New York and featured in a three-page color portfolio in Fortune magazine for May.

## The Profession and the Public

EDITOR:

James E. Stageberg, AIA, associate professor of architecture at the University of Minnesota, acted as a guest editorialist in a recent Sunday section of the *Minneapolis Tribune*. His point was that a *great* architect cannot make a great building by himself. He needs a *great* owner.

Then he lamented the fact that little or nothing is being done to train the inhabitants of the cities on how architecture influences their affairs. Nor does the profession really project to the public the understanding of what an architect is and what he does. These are good reasons why it is hard to find great owners.

Professor Stageberg pointed out that it is inconceivable that there are so few public shows and exhibitions of the mother of all the arts. Because architecture touches the lives of many more people than painting or sculpture, it is probable that vastly greater numbers would attend a showing of the recent additions to a city's environment.

Maybe the reason for the lack of exhibition of completed buildings is the architect's preoccupation with models—the ultimate in realism but rarely appropriate to convey the spirit of the design or its symbolism. However, renderings of significant and memorable features of a structure along with attractive overall photographs could make a striking public showing.

I can imagine the gala opening of the "Annual Art of Architecture" showing at the local gallery. A reception is held involving ranking politicians, civic leaders, art and architectural patrons, educators and

clergy. The attendant publicity could fill the gallery with the public for a month. An involvement feature would be a vote by the viewers for their favorite new building.

This involvement of the masses is probably an ingredient the profession has lacked. To consider the public as incompetent to judge buildings is beside the point. It does judge or ignore them; in either case, the profession loses if it doesn't orient its thinking to the people who will be the *great* owners, and enrich their native desire for a more pleasant and usable community.

Professor Stageberg's suggestion could be the beginning of a country-wide interpretation of architecture to the public. This is the grassroots start to better design and an understanding among the people of the rewards that accrue and the sacrifices that are necessary if our cities are to be anything but a jumble of selfish enclosures.

R. H. JACOBS

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## Mary Ann Behinds

EDITOR:

I read with great interest your article on the "Bowhouse" [April] and found the project extremely delightful. However, I must take exception with an editor's note which states that the "house . . . has a Mary Ann behind."

Close scrutiny reveals that the "behind" in reality has a Thurber dog looking quizzically at a section of a building designed by our office, namely, the S.U.R.G.E. Laboratory Building for the University of California Medical School in San Francisco.

Now I wish to make it clear that I do not object—in fact, we are flattered—that our building design along with St. Peter's has been selected to enhance this fine structure. I am merely objecting to its being referred to as belonging to the "Mary Ann" school of architecture, when obviously it is not. ROBERT B. MARQUIS, AIA

San Francisco, Calif.

ED. NOTE: The "Queen Anne front," by the way, is a sketch of Philadelphia's Orpheum Theatre by the late Alfred Bendiner.

PHOTO & ART CREDITS: Kaiser Aluminum & Chemical Corp.—p. 57; Atomic Energy Commission-West Virginia University—pp. 65-66; Ansel Adams—pp. 69-73; Paul Thiry FAIA—pp. 75-77; Osamu Murai—pp. 84-86; Masao Arai—pp. 87-88; Shigeo Okamoto—p. 89; Paul D. Spreiregen AIA—pp. 92-93; Roach Photos—p. 95; National Park Service—p. 96; State Historical Society of Colorado—p. 97; Roach Photos—p. 108; Ellen Morris—pp. 121-23; Wayne Gripton Lyon—pp. 147-48.



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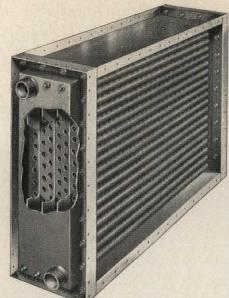
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## NCARB UNIFORM EXAMINATIONS

BY HARRY E. RODMAN, FAIA Professor, Rensselaer Polytechnic Institute

The following statement by the chairman of the NCARB Committee on Examinations is in reply to the article "Eolithic Examinations" by Jeffrey Cook, appearing in the quarterly section of the Association of Collegiate Schools of Architecture (p. 78) in the May AIA JOURNAL.

Professor Cook's article demands an immediate answer, not because he is critical of us but because of the tenuous relationship between his critique and fact. Unfortunately, space is limited and I must be brief.

In the body of his article, Professor Cook seems to quote 10 questions from the examination in History and Theory-with his observations. In fact, none of the questions are quoted correctly, his changes affect the questions in a major way, and it is his changes that form the basis for most of his criticism. One example is typical.

#### **NCARB Test Question**

In the Byzantine period of architecture, Constantinople had available nearby

- (A) good building stone (B) clay for bricks (C) rubble for concrete
- (C) rubble for concrete (D) an abundance of lumber

#### Professor Cook's Version

Which of the following building materials is most typical of the architecture of Constantinople?

- 1. Brick
- Mosaics Marble
- 4. Concrete

He then criticizes us on the basis of his answer choices. He says all were used, facetiously eliminates mosaics and concrete, and asks if the candidate is to choose between brick and marble by weight.

In a later example cited by Professor Cook, he thinks we intended to refer to "Odo" of Metz instead of the "Otto" he attributes to us. He is right, and "Odo" is the word that appears clearly in the examination. For good measure, he then completely changes two of our answer choices on this question and accuses us of careless typography.

In the Gamble House example, our question referred not to a statement identifying a building but to a photograph, and questions were asked on wood textures, plan patterns and plan qualities. None of these terms appear in Professor Cook's "quotation"; he completely misquotes three of our answer choices and adds on his own a fourth choice of "structural ingenuity," which he then proceeds to criticize.

In the ancient Egypt example, the introductory statement is completely reworded by Professor Cook. He changes the term "influence" to "origin," and this word becomes the neat basis for a cute comment.

The pattern continues through the 10 examples cited by Professor Cook. In the next-to-the-last example, he criticizes an answer choice of the United Nations—no reference to the United Nations appeared in our version of the question. He closes his list rather modestly with a mild rewording of the introduction, a change of one answer choice and a conclusion that his "right" answer must necessarily be different from the "official correct answer.

On reading the article we were startled to find that the questions being published were in a series of examinations still being used and that six states were planning in the near future to administer them.

Our check showed that Professor Cook obtained his information by taking the examinations as a candidate for licensure in Arizona. At first glance it appeared that he was quoting exact questions from copyrighted material, questions in examinations obviously intended for use elsewhere.

Although further study shows that his questions are far from copies, we have taken corrective action in the states scheduled to give this examination. Arrangements are such that the candidates should not be harmed.

In a strange sort of way the article is a compliment. Professor Cook was obviously intent on finding things to criticize, and he went unerringly to our most difficult subject. But with 750 questions to choose from, in five objective examinations, it should have been possible to find 10 which would be easier to use and in which it would not be necessary to supply his own text for

criticism.

We are concerned, as is Professor Cook, about the common charge that this type of examination penalizes the most knowledgeable, and we look for any opportunity to determine whether this is true. I can assure him that we have pertinent information which shows that highly knowledgeable people score extremely high on our examinations.

In addition to his "quotations," Professor Cook ventures into the area of question evaluation and grading. In this he wanders about in his own eolithic forestnothing could be more primitive than his attitude that a fixed percentage must fail this examination, nor as questionable as his assumption of a knowledge of testing techniques superior to that of the Educational Testing Service, under whose guidance we have worked for six

If, as Professor Cook says, a "passing score of 75 percent has been proclaimed to be an absolute one," no one at NCARB has heard about it. A passing score has always been set on an evaluation of question difficulty; this is converted for record purposes to a scale where 75 is passing. From examination to examination, analytical methods allow us to maintain the same degree of difficulty and pass more candidates if the later group is more capable.

But he gives us some encouragement. He finds, "The NCARB examination in History and Theory does indeed recognize and give due weight to judgment and inter-pretation." The argument seems to be that his judgment would lead him to answers different from ours, but it is

not clear how he knows this, or if it is true.

It is also encouraging to find that he is not arguing against national standards, nor suggesting that the reasonable alternative is using essay examinations for what would amount to about 14,000 individual examination

papers each year.

The potential harm in this article, which is prefaced with a conclusion by ACSA Editor Marcus Whiffen that Professor Cook shows the examinations to be "vulnerable" on several counts, lies in a seeming rejection of deliberate attempts by NCARB to develop examinations on a broad base of communication and contribution.

We have invited comment and have received and welcomed honest criticism; letters of this nature-often from faculty members-have been answered fully as possible, and the answers have included an invitation to send us suggested questions. When these suggestions arrive they are given careful consideration by the Committee on Examinations, which in the past year has included among its 27 members seven present or former deans and three professors from schools of architecture.

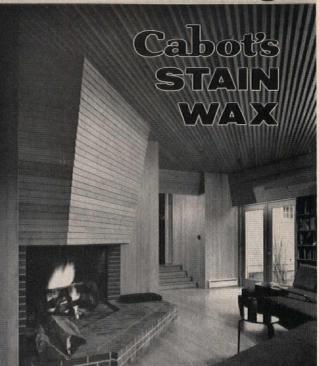
A recent effort has been the publishing of our working outlines as a means of communication on subject matter. These have been made available to boards for their candidates and are being sent to the schools. On request, we have made arrangements for appropriate faculty members, under reasonable controls, to study at leisure the examinations themselves. We intend to extend this plan as rapidly as means will allow and as far as responsible re-

action indicates we can go.

If Professor Cook had expressed to us an interest prior to writing his article, we could have avoided the gross misunderstanding on his part and possibly benefited in the future by contributions in the field of his specialty. We have much to do. The five objective examinations, the only ones furnished by NCARB, are now being used by 52 of the 54 licensing boards. His reaction is an exception to the generally complimentary reception from boards and candidates. All states accept them for reciprocal licensure without supplementary examinations of any kind.

We make no apologies for the present examinations, but we are intent on finding all possible ways for improvement. We feel they are a major step toward a national measure of competence for practice and the benefits which would arise from uniform acceptance of a single basis for licensure.

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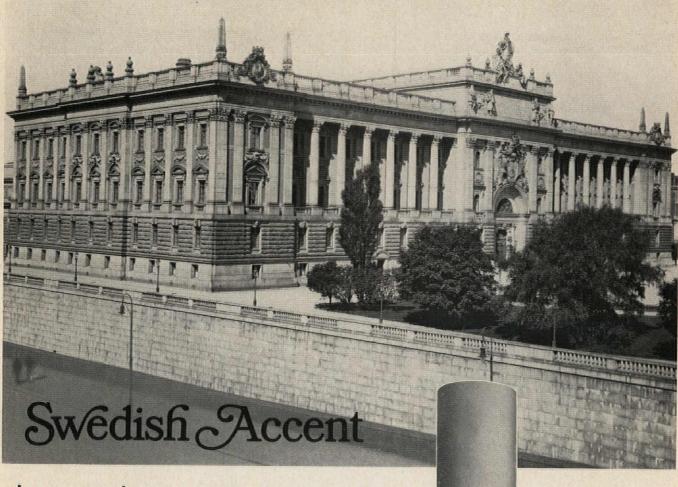
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